Final Environmental Assessment

Questar Feeder Line 24 Highland, Utah Replacement Project

United States Department of Agriculture

U.S. Forest Service

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Utah County, Utah
Pleasant Grove Ranger District,
Uinta-Wasatch-Cache National Forests

Document Information

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1 Purpose and Need

1.1 Introduction

The Pleasant Grove Ranger District (PGRD), Uinta-Wasatch-Cache National Forests (UWCNF), received a proposal from Questar Gas Company (Questar) to replace 0.29 miles of existing 10-inch natural gas pipeline, known as the Questar Feeder Line (FL) 24 Highland City Replacement Project (Project). The pipeline segment proposed for replacement occurs within an existing utility corridor situated on the foothills above Highland City. Questar's FL 24 currently provides natural gas to residential and commercial customers in Utah County. The existing 10-inch diameter steel pipe will be replaced with 12-inch diameter steel pipe in order to meet increasing customer demands for natural gas and to increase pipeline depth below the American Fork River. Approximately 0.24 miles of the pipeline replacement will be on lands administered by the U.S. Forest Service and approximately 0.05 miles will be on private lands. Once the replacement section is installed, the section of existing, 10-inch diameter pipe will be abandoned in place to minimize additional ground disturbances. The maximum width of the right-of-way (ROW) construction corridor is 75 feet with a permanent ROW width of 50 feet. Access and equipment staging for the Project will make use of existing dirt access roads and open areas around the Project and will not require additional ground disturbance. The Project area is shown in Figure 1.

The UWCNF prepared this environmental assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and Forest Service regulations regarding its implementation (36 Code of Federal Regulations (CFR) §220). The EA analyzes and discloses the direct, indirect and cumulative effects of the alternatives for replacing the existing 0.29 mile segment of Feeder Line 24 pipeline that crosses land managed by the Forest Service. The analysis will lead to a decision on whether and under what conditions to allow the pipeline replacement activities on NFS lands. The Project would be approved by the Forest Service with a conclusion of a Finding of No Significant Impact (FONSI).

This chapter includes the background information for the EA process. Sections include a summary of the Proposed Action and the purpose and need it addresses, the decision to be made on the basis of this EA, relevant UWCNF, Forest Service planning guidelines, and a description of how the PGRD informed the public of the Proposed Action and how the public responded. Other permits and authorizations that may be necessary to implement the Proposed Action are also presented.

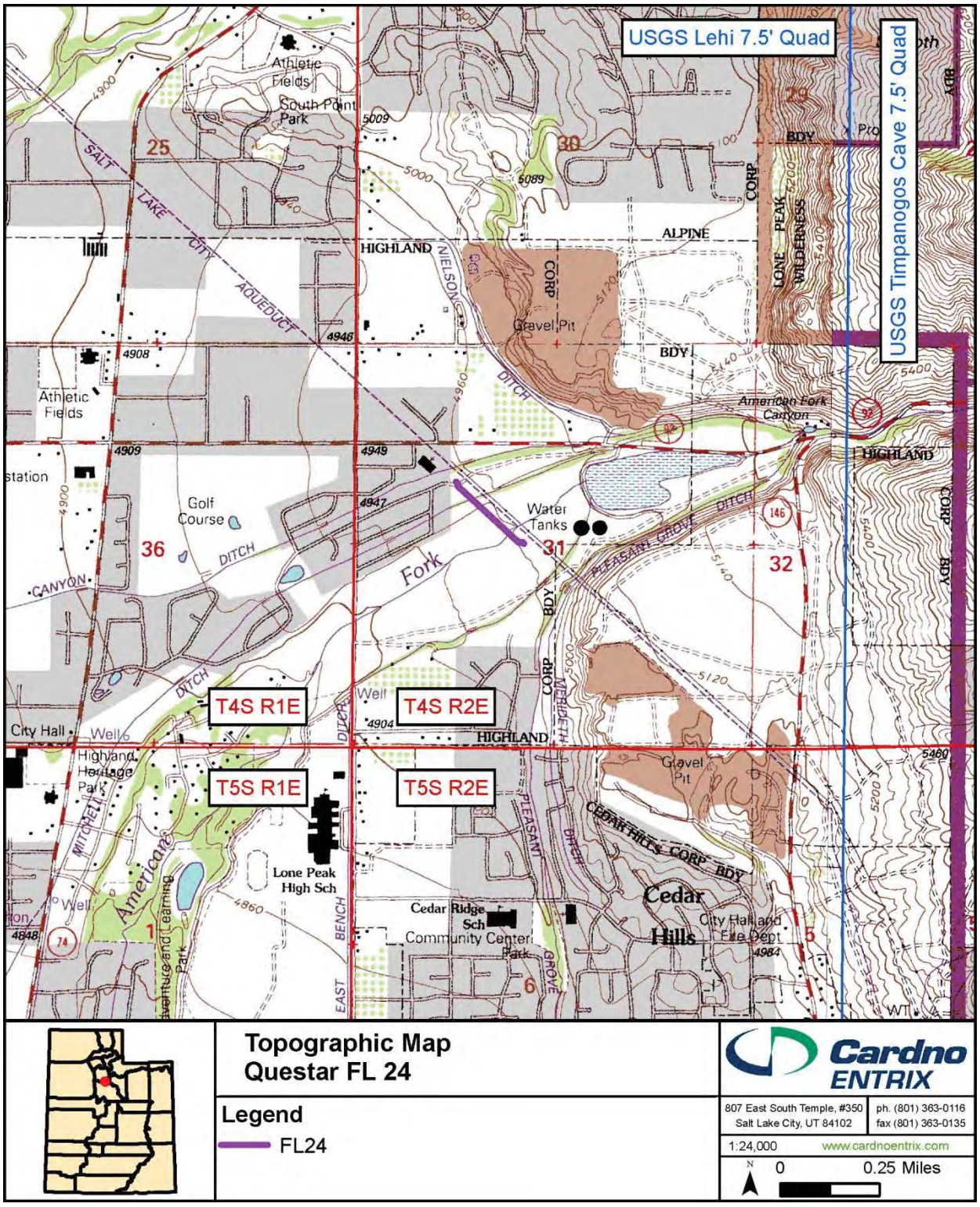

Figure 1-1: Project Vicinity Map

1.2 Summary of Proposed Action

The Proposed Action consists of construction activities associated with the replacement of a section of Questar's FL 24 natural gas pipeline near Highland, Utah. Questar's FL 24 currently provides natural gas to residential and commercial customers in Utah County. Approximately 0.29 miles of existing 10-inch diameter steel pipe will be replaced with 12-inch diameter steel pipe in order to meet increasing customer demands for natural gas and to increase pipeline depth below the American Fork River. Approximately 0.24 miles of the pipeline replacement will be on lands administered by the U.S. Forest Service and approximately 0.05 miles will be on private lands. Once the replacement section is installed, the 0.29-mile section of existing 10-inch diameter pipe will be abandoned in place to minimize additional ground disturbances.

The existing pipeline occupies a 16-foot-wide permanent ROW. Questar requests an additional 34 feet in this replacement section for a total permanent ROW of 50 feet. An additional temporary 25-foot ROW will be required for construction for a total construction width of 75 feet (Project ROW). The 12-inch diameter replacement pipe will be buried adjacent to the existing pipeline within the new ROW. Construction of the Project is scheduled to begin in summer of 2014 and is expected to be completed in approximately 60 days.

The replacement Project will cross the American Fork River three-quarter mile west of the mouth of American Fork Canyon at the eastern edge of Highland City. It will parallel the Salt Lake Aqueduct easement between the northern end of the Cedar Hills Golf Course and the eastern end of the Alpine Country Club subdivision.

1.3 Purpose and Need

The purpose and need of the action is to replace a section of Questar's FL 24 old natural gas pipeline with new larger diameter pipe that adds increased capacity and meets current safety standards. This upgrade is intended to meet new residential development and associated residential customer demands. The FL 24 pipeline exists within a ROW that was originally located on private land but subsequently was traded and is now administered by the Forest Service. The Project crosses land managed by the Pleasant Grove Ranger District of the UWCNF.

This EA evaluates the Proposed Action and alternatives relative to land use policies contained within the 2003 Revised Uinta National Forest Land and Resources Management Plan (Forest Plan) (USDA Forest Service 2003a).

1.4 Decisions to Be Made

In consideration of the stated purpose and need and this analysis of environmental effects, the UWCNF Forest Supervisor as the Responsible Official, will review the Proposed Action and alternatives in order to make the following decisions:

> Whether to authorize the Proposed Action or an alternative to it;

> What mitigation measures and design features to require for the action authorized; and

> What evaluation methods and documentation is required for monitoring Project implementation and mitigation effectiveness?

1.5 Planning Guidance

1.5.1 Forest Plan

The Forest Plan provides the primary guidance for management of the land and resources on the Forest. The Forest Plan indicates that the Questar FL 24 pipeline falls within the American Fork Management

Area and is therefore subject to both Forest-wide and Management Area-specific standards and guidelines pertinent to this area. The Project is a Forest Service Administrative site within Highland City limits and has been assigned no Forest Service Management Prescriptions under the Forest Plan. Management prescriptions for the Project will follow management prescriptions according the Highland City land use. The effects analysis for each of the issue topics will address whether or not the action is in compliance with the Forest Plan standards and guidelines.

1.5.2 Other Planning Guidance

The Council on Environmental Quality (CEQ) guidance stipulates that the Forest Service should inquire of other agencies whether there are any potential conflicts that could arise from the Proposed Action. If so, this EA must acknowledge and describe the extent of those conflicts. It is Forest Service policy to work with local governments and make every effort to comply with local land use plans and regulations, even though the agency is not legally required to do so. Utah County has adopted general and land use planning documents.

1.6 Scoping and Issue Identification

The main purpose of scoping is to get public input on the "scope" of the EA, the issues and concerns it should address, and the means to avoid or minimize adverse impacts (i.e., design criteria, alternatives, and mitigation measures). On June 24, 2013 the PGRD issued a public scoping notice that summarized the Proposed Action and invited comments regarding the scope of this EA. The notice was mailed to 108 agencies, organizations, and individuals (adjacent stakeholders) on the PGRD's project scoping mailing list. The notice was published in the Provo Daily Herald on June 27, 2013.

The 30-day scoping period closed on July 27, 2013. Two comments specific to the Project undertaking and four inquires for additional information were received as a result of this publication. The scoping notice is available at the PGRD Office in Pleasant Grove, Utah in the Project record. The opportunity for public involvement in this NEPA process and summary of comments received is fully described in Chapter 4.

The Proposed Action was reviewed by the UWCNF staff in order to determine the environmental potential impacts and alternatives to the Proposed Action (40 CFR §1508.25). Issue statements were formulated, organized by resource discipline, then reviewed and approved by the Responsible Official. They include issues to be analyzed in depth and those dropped from in depth analysis for various reasons. These two categories of issues as they apply to this Proposed Action are as follows.

1.6.1 Issues to Be Analyzed In Depth

- Vegetation (including special status species (i.e., U.S. Fish and Wildlife Service (USFWS) federally listed plant species, Forest Service Intermountain Region (Region 4) Sensitive plant species and noxious weeds and invasive species)
    - How would the Proposed Action affect vegetation and special status species?
    - How would the Proposed Action affect the spread of invasive and noxious weeds?

- Soils
    - How would the Proposed Action affect soils?

- Water (including water quality, water rights, public water supplies, riparian areas, Waters of the U.S., and floodplains)
    - How would the Proposed Action affect water quality in the American Fork River and the adjacent American Fork Canyon Ditch irrigation canal?
    - How would the Proposed Action affect wetlands, riparian areas, and floodplains?

- Fish and Wildlife (including migratory birds, raptors, big game, and special status species (i.e., USFWS federally listed species, Forest Service Region 4 sensitive species, UNF Management Indicator Species (MIS), and State of Utah Wildlife Species of Concern or Conservation Agreement Species). Collectively referred to as special status species.
    - How would the Proposed Action affect fish and wildlife habitat and special status fish and wildlife species?

- Archaeological, Cultural and Historic Resources
    - How would the Proposed Action affect archaeological, cultural and historic resources?

- Air Quality
    - How would fugitive dust associated with construction affect air quality?
    - How would mobile source emissions associated with construction activities affect air quality in Highland City?

- Public Health and Safety (includes public safety risk during construction and hazardous or solid waste)
    - How would the Proposed Action affect public health and safety?
    - What types of waste would be produced associated with construction activities?

1.6.2 Issues Considered but not Analyzed in Depth

- Geology
    - How would the construction activities affect the stability of slopes in the vicinity of the Proposed Action?

      The Project ROW is located within the alluvial fill material within the American Fork River floodplain. No steep terrain or other vulnerable geological formation exist within the Project ROW.

- Energy Distribution
    - How would the Proposed Action affect the supply of natural gas?

      Questar's FL 24 currently provides natural gas to residential and commercial customers in Utah County, and is especially important in seasons of higher gas demand. The temporary loss of this segment of FL 24 pipeline during construction would be offset with re-routing activities and conducting construction during the low-demand season.

- Environmental Justice
    - How would the Proposed Action affect minorities, low-income individuals, Native Americans, women, or any civil liberties?

      The decision made related to this proposal is not anticipated to have any disparate impacts to individual groups of people or communities. It would not adversely affect minorities, low-income individuals, Native Americans, women, or any civil liberties.

- Land Use and Access/Recreation
    - How would the Proposed Action affect land use and access in the area, including recreation opportunities?
    - How would the Proposed Action affect recreationists that use the area for hiking, fishing, and hunting?

      The Project ROW is not a recreation destination and does not provide access to other recreation destinations. The Project ROW is not readily accessible and experiences minimal use by the public. Other operators in the Project ROW would be alerted of the Project prior to the commencement of activities.

- Scenic Resources
  - How would the Proposed Action affect the scenic integrity of area?

    No scenic resources analyses were suggested through interdisciplinary review and scoping on this Proposed Action, or identified through the initial analysis of environmental effects. The existing pipe line is located within a ROW on land that the UWCNF acquired through land acquisition and there are no management prescriptions for this site nor have any Visual Quality Objectives (VQO) been established. The area is treated as an Administrative site and managed in compliance with Highland City land use guidelines.

    The Project ROW is not located in a forest setting, is adjacent to residential development and buried water lines, a municipal golf course, and is disturbed due to uncontrolled dispersed human use and activities. The Proposed Action will not alter existing scenic quality of the immediate area or change the landscape character of the site. All disturbed areas resulting from construction of the Project will be reclaimed.

- Socio-economics
  - How would the Proposed Action affect local communities?

    Construction activities would provide a short-term increase in employment opportunities. The Proposed Action has the potential to result in beneficial effects to socio-economics of surrounding communities through the short-term creation of jobs and the long-term improvement in natural gas delivery. Due to the relatively short time period in which construction would occur and the relatively small Project size, the increase in employment opportunities would not likely be noticeable.

- Greenhouse Gas Emissions
  - How would the Proposed Action affect greenhouse gas emissions?

    The CEQ indicated in a February 18, 2010 memo to all federal agencies that analysis of the impacts of greenhouse gas emissions below 25,000 metric tons may not be meaningful and are not warranted. The estimated quantities of carbon dioxide (CO_2) equivalents during construction would be below this threshold for analysis.

    In addition, an evaluation of greenhouse gas emissions is not warranted because:
    - No standards have been set by regulatory agencies.
    - There is no method to measure their direct and indirect impacts.
    - Assessment of greenhouse gas emissions and climate change is still being defined.
    - Global scientific models are inconsistent and regional or local scientific models are lacking so it is not technically feasible to determine net impacts.

- Native American Religious Concerns
  - How would the Proposed Action affect Native American religious concerns?

    Based on the cultural resources file search and Class III cultural resources inventory for the area to date, no Native American religious concerns are associated with the Project area.

- Paleontology
  - How would the Proposed Action affect paleontological resources?

    No known paleontology resources are known to occur within the Project area. If paleontological resources are discovered, construction would cease, pending a determination of significance.

1.7 Required Permits and Authorizations

Table 1-1: Other Permits, Approvals, and Consultations That May be Required for Implementation of the Proposed Action

Agency	Type of Action	Description of Permit or Action
Federal		
Environmental Protection Agency (EPA)	Clean Air Act	The Clean Air Act is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants. The Forest Service must ensure that its activities, or activities it permits, comply with these national standards and state and local requirements for air pollution control (USDA Forest Service 2013a).
	Federal Water Pollution Control Act, as amended by the Clean Water Act (USC 1344)	Requires compliance with state and federal pollution control measures intended to prevent degradation of in-stream water quality needed to support designated uses; control nonpoint sources of water pollution through conservation or Best Management Practices (BMPs); gives federal agencies leadership in controlling nonpoint sources of pollution from managed lands; provides rigorous criteria for controlling discharges of pollutants into waters of the United States. National Pollution Discharge Elimination System, Stormwater Permit for storm water discharges at construction sites.
U.S. Army Corps of Engineers (USACE)	Section 401/404 of the Clean Water Act (USC 1344) Issuance of Clean Water Act, Section 404 Permit	Permit for placement of fill/dredging in waters of the U.S. The USACE issues permits required for the discharge of dredged or fill materials into waters of the U.S., including wetlands. The required Stream Alteration permit will be obtained from the Utah Division of Water Resources.
U.S. Department of Agriculture (USDA) - Forest Service	Multiple-Use, Sustained Yield Act National Forest Management Act of 1976 (NFMA)	Requires administration of National Forests for a variety of uses including outdoor recreation, range, timber, watershed, and fish and wildlife purposes. Requires the Secretary of Agriculture to assess forest lands, develop a management program based on multiple-use, sustained yield principles, and implement a resource management plan for each unit of the National Forest System. Outlines policy and direction for wildlife and riparian and aquatic resources as can be found in Forest Service Manual's 2500 and 2600, and the Forest Service Handbooks.

Agency	Type of Action	Description of Permit or Action
	Executive Order 11990	Directs agencies to preserve and enhance the natural and beneficial values of wetlands while conducting management activities on Federal lands.
	Executive Order 13112 – Invasive Species	Directs federal agencies to prevent invasive species introductions, control weed populations, monitor and restore areas where invasive species have occurred, develop technologies to control invasive species, and educate the public on invasive species issues.
	Federal Noxious Weed Act of 1974 (as amended by Section 15, Management of Undesirable Plants on Federal Lands, 1990)	Authorizes cooperation among federal and state agencies in the control of weeds.
	Conformity with National Ambient Air Quality Standards (NAAQS)	The General Conformity Rule ensures that federally funded or supported actions taken by federal agencies and departments, including the Forest Service, meet national standards for air quality in federal nonattainment and maintenance areas. Under the Federal Clean Air Act, any area that violates national ambient air quality standards for any of the six criteria pollutants is designated as a nonattainment area. These pollutants are sulfur dioxide, fine particulate matter, carbon monoxide, ozone, nitrogen oxides, and lead. Maintenance areas are any former nonattainment area that has been redesignated to attainment status and may require special measures to maintain its attainment status (USDA Forest Service 2013a). Activities that emit significant levels of criteria pollutants in a nonattainment or maintenance area are subject to the conformity rule. This rule requires the Forest Service or any federal agency to demonstrate that their action will not impede the State Implementation Plans to attain or maintain the ambient air quality standard (USDA Forest Service 2013a).
	R1/R4 Soil and Water Conservation Practices Handbook (FSH 2509.25)	Provides standards that must be followed.
	National Historic Preservation Act of 1966 (NHPA) as amended	It is the primary law that guides management activities (36 CFR 800). It requires agencies to take into account the effect of management activities on heritage resources (Section 106), and the development of long-term management plans that locate and protect heritage sites, and then integrate sites and information into overall agency programs and goals (Section 110) (NHPA 2006).

Agency	Type of Action	Description of Permit or Action
		Section 106 of the NHPA and its implementing regulations require an inventory and consideration of the potential effects, of any Project undertaken by the federal government, on historic properties – (heritage resources) that are listed on or eligible for the National Register of Historic Places (NRHP).
	The American Religious Freedom Act of 1978	Ensures American Indians access and use of religious sites, and directs federal agencies to consult with Tribes on ways to protect this right.
	The Archeological Resources Protection Act of 1979	Imposes civil penalties for any removal, damage, illegal excavation, or defacement of archaeological resources (36 CFR 296).
	The Federal Fire Policy Act of 1995	Outlines policies on fire suppression and integrating fire on the landscape.
	The Native American Graves Protection and Repatriation Act of 1990	Requires an inventory of existing artifact collections, and the return of human remains, sacred objects, and objects of cultural patrimony to the appropriate Tribes. It also requires consultation with Tribes to develop procedures to be used in the event that human remains are discovered.
	The Organic Administration Act of 1897	Authorizes the Secretary of Agriculture to make provisions for the protection of national forests against destruction of fire.
State of Utah		
Department of Environmental Quality: Division of Air Quality	Issuance of Approval Orders under blanket air permit	The Air Quality Division's review ensures that state and federal air quality standards are not exceeded. Approval Orders are required for certain stationary emission sources. Responsible for issuing permits for any operation that emits any contaminant into the air.
	Utah Administrative Code R307-309	Establishes minimum work practices and emission standards for sources of fugitive emissions and fugitive dust.
Department of Environmental Quality: Division of Water Quality	Utah Nonpoint Source Pollution Management Plan (2000) Water Quality Act (Utah Code Title 19 Chapter 5) General SWPPP Permit for Construction under the Utah Pollutant Discharge Elimination System (UPDES);	Provides a watershed approach to controlling Nonpoint Source (NPS) pollution and guidelines for BMPs. Authorizes state enforcement of Clean Water Act to establish beneficial use, standards, and enforcement. Control pollution of waters of the state. The Water Quality Division's review ensures that state and federal water quality standards are not exceeded. Preparation of a Storm Water Pollution Prevention Plan (SWPPP) is a requirement for construction of a site that disturbs greater than 1 acre.
Department of Natural Resources: Division of Water Rights	Section 73-3-29 of the Utah Code	Requires written authorization from the State Engineer to alter the bed or banks of a natural stream and in some cases may require a Stream Alternation Permit for work within regulated waters.

Agency	Type of Action	Description of Permit or Action
Department of Natural Resources: Division of Wildlife Resources	Title 23 Wildlife Resources Code of Utah Agency coordination	The Division of Wildlife Resources is responsible for management and protection of state wildlife and fish resources. The Division of Wildlife Resources is responsible for management and protection of state wildlife and fish resources.
State History Division	Consultation on National Historic Preservation Act, Section 106 compliance process.	The State History Division is responsible for protection of cultural resources.
Utah Division of Forestry, Fire and State Lands	Section 105 of the 2006 Wildland Urban Interface Code. Permits Seasonal Fire Restriction Orders	The Division is required to establish minimum standards for a wildland fire ordinance and specify minimum standards for wildland fire training, certification and wildland fire suppression equipment.
	Utah Noxious Weed Act of 1971	Requires landowners and managers to manage noxious weeds if they are likely to damage neighboring lands, and provides that each county in Utah shall adopt a weed management plan for the unincorporated portions of the county.
Local		
Utah County	§9-1-1 Utah County Fire Prevention and Protection	Utah County is required to establish minimum standards for the County's fire ordinance and specify minimum standards for construction and fire prevention measures.

2 Proposed Action and Alternatives

2.1 Introduction

This chapter details the Proposed Action and outlines the alternative formulation process. Alternatives considered but not analyzed in detail, and alternatives considered in detail are described. A summary of the environmental impacts of the Proposed Action and alternatives, and associated design criteria and mitigation measures are provided.

2.2 Alternative Formulation

This section outlines the process and rationale for alternative formulation, while Section 2.3 describes the resulting alternatives. Analysis of the No Action Alternative is required under NEPA (40 CFR §1508.25) to provide a baseline for assessing the impacts of the Proposed Action. In this case, no action would mean that the proposed Project would not be approved.

The environmental analysis addresses the direct, indirect, and cumulative effects of the Alternative 1 - Proposed Action and the Alternative 2 - No Action. No other alternatives requiring in-depth analysis were suggested through interdisciplinary review and scoping on this Proposed Action or identified through the initial analysis of environmental effects.

2.3 Alternatives Analyzed in Depth

2.3.1 Alternative 1 – Proposed Action

The Proposed Action consists of construction activities associated with the replacement of 0.29 mile of existing 10-inch diameter natural gas pipeline with a 12-inch diameter natural gas pipeline and increase of the existing 16-foot-ROW by 34 feet for a total permanent ROW of 50 feet (the maximum width of the ROW construction corridor would be 75 feet with a permanent ROW width of 50 feet). The Proposed Action is located within and directly adjacent to an existing utility ROW. Construction activities would occur during the summer of 2014 for duration of approximately 60 days. The existing 10-inch diameter piping would be deactivated and abandoned in place; new 12-inch diameter pipe would be installed, tested, and placed in service. The proposed activities are discussed in three phases: Phase 1 - Preliminary Construction Work, Phase 2 - Standard Pipeline Construction, and Phase 3 - Clean-up, Restoration, Reclamation and Pipeline commissioning.

Initial design investigations that have been completed include the following:

- Project Design:
  - Geotechnical studies
  - Identification of the pipeline centerline, work areas, Project staging areas, and access points.
- Baseline Field Surveys of the Project area:
  - Jurisdictional Waters of the U.S.
  - Archaeological, cultural, and historic resources,
  - Wildlife and vegetation – USFWS federally listed species, Region 4 Forest Service Sensitive Species of interest, raptor nests, and noxious and invasive weeds.

Coordination with state and federal resource management agencies would continue through Project completion.

Phase 1 - Preliminary Construction Work

Establishment of construction access points would be necessary to safely and efficiently access the Project ROW. Primary access would be gained from an existing access road off of Country Club Drive in

T4S, R2E, Section 31. Another existing dirt road may be used to minimize impact to the American Fork River while accessing the southern part of the project. . Accessing the ROW from this location would not require a Utah Department of Transportation (UDOT)-approved closure.

Prior to construction, the section of the FL 24 pipeline that is proposed to be replaced would be isolated and depressurized. Local emergency response agencies and adjacent landowners would be contacted prior to this activity.

Construction crews would clear vegetation from the ROW. Clearing of vegetation will be kept to the minimum and limited to only the removal necessary for safe construction operations. In some cases this may be less than the approved temporary ROW and in other cases this may include most of or the entire approved temporary ROW depending on localized conditions. Root systems will be left in place, where feasible and where they do not pose a safety concern for workers or an impediment to equipment or rubber-tired vehicle access. All pipeline construction activities, including clearing and grading, will only be performed within the approved construction (temporary) ROW.

Trees, brush, other woody material, and rocks cleared from the ROW will be moved to one side of the ROW for later use in reclamation. These uses could include measures to impede unauthorized vehicle traffic, or re-contouring and reclamation efforts.

Topsoil removed during the clearing and grading operations will be segregated from subsoils. Topsoil and subsoils will be placed in separate piles on the non-working side of the ROW for subsequent restoration activities.

Phase 2 - Standard Pipeline Construction

Standard pipeline construction consists of the following tasks:

- Trench excavation
- Pipe stringing (laying pipe along the ROW)
- Use of hydraulic bending machine to conform pipe with the bottom of the trench
- Welding of pipeline joints and coating
- Pipe Laying and tie in
- Placement of backfill over new pipe in the trench
- Pipeline testing

Trench excavation

Excavation of the trench will be conducted with the use of conventional track-mounted backhoes. The pipe will be cut on each end near the end of the project to allow for tie-ins with the FL 24 pipeline. The abandoned section of the existing pipe will be left in place. A typical trench will be excavated 36-40 inches wide and approximately 40 inches deep. The depth of the trench will vary with the conditions encountered. The cover from top of pipe to ground level will generally be 40 inches. In all instances, pipeline burial depths will be in conformance with the requirements of DOT pipeline safety regulations. The minimum cover from top of pipe to ground level will be at 60 inches under the American Fork River.

Accepted erosion control practices will be followed in order to minimize erosion during excavation and construction activities. Erosion control practices will adhere to the Utah Pollutant Discharge Elimination System General Permit (UPDES) for Storm Water Discharges Associated with Construction Activity. Project impacts are anticipated to be approximately 2.6 acres and will require development of a SWPPP. Although not anticipated, if groundwater is encountered during excavation, discharge from any trench de-watering will be appropriately permitted and conducted following established Best Management Practices (BMPs). In general, pipeline excavation will be conducted such that surface waters will not freely flow into the trench.

The replacement Project will cross the American Fork River three-quarter mile west of the mouth of American Fork Canyon and the American Fork Canyon Ditch at the eastern edge of Highland City. No

controls or structural changes to the stream channel or irrigation ditch are anticipated. The construction work will be performed during the low flow period utilizing “dry” crossing techniques to minimize water quality impacts and sedimentation. BMPs will be followed with no impacts to surface water quality expected. All necessary stream/wetland crossing permits will be obtained prior to construction. Permit term and conditions will describe methods and stipulation required to mitigate any impacts to water quality.

Pipe stringing

Pipe would be stockpiled at staging areas and transported to the ROW. Where space permits, the pipe would be strung along the edge of the ROW. Pipe would be brought in one joint at a time where space is confined.

Stringing operations will be coordinated with trenching and installation activities in order to properly manage the construction process. As construction proceeds, some of the pipe and stringing equipment will be temporarily stored at staging areas within the ROW.

Bending

After the joints of pipe are strung along the trench but before the joints are welded together, individual joints of the pipe will be bent to accommodate horizontal or vertical changes in direction. Such bends will be made using an approved cold, smooth bending machine having a hydraulically operated shoe that makes the bend.

Welding and Coating

After the pipe joints are bent, the pipe will be lined up end-to-end and clamped into position. The pipeline will then be welded in conformance with 49 CFR Part 192, Subpart E, "Welding of Steel in Pipelines" and API 1104, "Standard for Welding Pipelines and Related Facilities," latest edition. Welds will be visually inspected by a qualified inspector and will be subject to radiographic inspection in conformance with DOT requirements. A specialized contractor qualified to perform radiographic inspection will be employed to perform this work. Any defects will be repaired or removed as required under the specified regulations and standards.

The pipeline will be externally coated prior to delivery. After welding, field joints will be coated with either a tape wrap or shrinkable sleeve wrap. Before the pipe is lowered into the trench, the pipeline coating will be visually inspected and any defects or scratches will be repaired.

Pipe laying

Once the pipe has been welded and inspected, it will be lowered into the trench. Side-boom tractors will be used to lift the pipe, position it over the trench, and lower it in place. Inspection will be conducted to verify that minimum cover is provided, the trench bottom is free of rocks and other debris that could damage the pipe, external pipe coating is not damaged, and the pipe is properly fitted and installed into the trench.

Backfilling

Backfilling will begin after the pipeline has been successfully placed in the trench and final inspection has been completed. Backfilling will be conducted using a bulldozer or other suitable equipment. Backfill will generally consist of the material originally excavated. In some cases, backfill material from other areas (borrow material) may be needed. In rocky areas, padding material or a rock shield will be used to protect the pipe. Backfill will be graded and compacted, where necessary for ground stability, by being tamped or walked in with a wheeled or track vehicle. Subsoils will be backfilled first, followed by replacement of the stockpiled topsoil. Any excess excavated materials, or materials unfit for backfill, will be properly disposed of in conformance with applicable laws or regulations, and landowner or jurisdictional agency

requirements. Where possible, these surplus materials will be spread out over the ROW to avoid off-site disposal. The American Fork River channel crossing will be restored to near pre-construction conditions.

Pipeline Testing

After completion of pipeline construction, the pipeline will be integrity tested in compliance with DOT pipeline safety regulations (49 CFR 192). Prior to testing, the pipeline will be cleaned by passing reinforced poly "pigs" through the interior of the pipeline. The pipeline segment will then be filled with nitrogen, pressurized, and held for the specified duration of the test.

Phase 3 - Clean-up, Restoration, Reclamation, and Commissioning

Following completion of reclamation, all trash, debris, and other solid wastes will be removed from the ROW. All material will be disposed of in the appropriate manner in existing authorized sanitary landfills. No solid waste will be buried along the ROW. After reclamation and cleanup, the Project area will be inspected to verify that reclamation and cleanup have been satisfactorily completed.

Following installation of the pipeline and backfilling of the trench, all disturbed areas will be re-contoured to their pre-construction condition as closely as practicable. Permanent erosion control structures (e.g., waterbars) will be installed, as needed, and all disturbed areas will be reseeded with those species designated in a seed mix approved by the Forest Service, and certified as weed free by the USDA seed lab.

In order to prevent rutting and subsequent erosional problems, measures will be taken to prevent unauthorized use of the ROW as a roadway. After seeding, trees, brush, and other woody material cleared from the ROW may be randomly scattered over the ROW. Rocks removed from the trench excavation will be used to block the ROW to future vehicular traffic, or randomly scattered across the ROW. Placement of the trees, brush, woody material and rocks would be done in such a manner as to not interfere with water diversions.

Upon completion of the testing of the pipeline and auxiliary facilities and receipt of all required approvals, the pipeline will be purged of air and charged with natural gas and the facilities will be placed in service.

The ROW will be inspected to monitor the effectiveness of the reclamation efforts and to identify any problem areas, including any new infestations or the spread of existing infestations of noxious and invasive weed species. Inspections will be conducted until 70 percent of the surrounding vegetation has established within the ROW. Remedial actions will be taken for any problem areas identified, including noxious and invasive weed treatment and as detailed in Questar's FL 24 Noxious and Invasive Weed Management Plan (Appendix B).

2.3.2 Alternative 2 – No Action

Analysis of the No Action alternative is necessary to provide an accurate contrast with the Proposed Action. Under the No Action alternative, the segment of the FL 24 pipeline would not be replaced and no ground disturbing activities would occur. Customers along the Wasatch Front rely on natural gas, primarily for heating homes in the winter. FL 24 is a primary supplier of natural gas for the Highland and Cedar Hills region, but the pipeline is nearly 50 years old and is scheduled for replacement in accordance with standard system maintenance practices. If this pipeline was not replaced, this critical peak demand supply would be at continually increasing risk for safety and reliability concerns. Should this source be interrupted during the peak demand months, a significant loss of natural gas service would be experienced in this region.

2.3.3 Alternatives Considered but Not Analyzed in Depth

No other alternatives requiring in-depth analysis were suggested through interdisciplinary review and scoping on this Proposed Action, or identified through the initial analysis of environmental effects. The

existing pipeline is located within an existing ROW on land that the UWCNF acquired through land acquisition and there are no management prescriptions for this site. The area is treated as an Administrative site and follows Highland City land use guidelines.

The project as proposed will not have any significant adverse effects. Moving the pipeline off Forest Service administered lands is not a reasonable alternative that would meet the purpose and need of the project. Relocating the pipeline from its current location is not economically and technically feasible given the surrounding land uses.

2.4 Summary and Comparison of Environmental Effects

Table 2-1: Summarizes and Compares the Direct and Indirect Environmental Effects of the Proposed Action and No Action Alternatives

Issue	Proposed Action Alternative	No Action Alternative
Vegetation (including special status species (i.e. USFWS federally listed plant species, Forest Service Region 4 sensitive plant species and noxious weeds or invasive species)		
How would the Proposed Action affect vegetation and special status species?	Clearing of vegetation would occur within the Project ROW. The Project ROW has been previously disturbed by public use and utility operators in the ROW and is vegetated with grasses, forbs, and some shrubs. Reclamation requires successful re-vegetation of the ROW with 70 percent of the surrounding desired vegetative cover, using a USFS approved and certified weed free seed mix. Approved weed control methods would be used if necessary to eliminate infestation of noxious weeds prior to construction. There would be no adverse impacts to vegetation under the Proposed Action. Plant species listed as threatened, endangered, candidate, or proposed by the USDI U.S. Fish and Wildlife Service are not known to occur in the Project Area. Plant species listed as sensitive on the Forest Service Region 4 list are not known to occur in the Project area. There would be no impact to special status plant species.	No impact on vegetation and special status plant species. The Project ROW would continue to support existing disturbed vegetation communities.
How would the Proposed Action affect the spread of invasive species and noxious weeds?	Any noxious weeds within the ROW would be treated or removed prior to construction activities. All off-road equipment and vehicles would stay within the ROW, therefore they will not track weed seeds onto the ROW. Questar would implement an approved Noxious and Invasive Weed Management Plan (Appendix B) which includes	There would be no impact to noxious weeds.

Issue	Proposed Action Alternative	No Action Alternative
	BMPs, in order to eliminate and control weed infestation on the ROW.	
Soils		
How would the Proposed Action affect soils?	The Proposed Action may affect soil conditions due to compaction and erosion, resulting in decreased soil productivity and soil loss. Construction activities may cause soil loss via downslope transport of disturbed surfaces, and further affect water quality. Proper implementation of construction BMPs and successful reclamation would mitigate any short-term impacts to the soil resource.	Impacts to soils would not occur, as construction activities would not be approved.
Water (including water quality, water rights, public water supplies, riparian areas, Waters of the U.S., and floodplains)		
How would the Proposed Action affect water quality in the American Fork River and the adjacent American Fork Canyon Ditch irrigation canal.	The Proposed Action could contribute suspended solid concentrations (e.g. sediment) from disturbed soil surfaces into the American Fork River and American Fork Canyon Ditch, which could directly affect water quality. The construction work will be performed during the low flow period utilizing “dry” crossing techniques to minimize water quality impacts and potential for sedimentation. A stream alteration permit will be obtained prior to construction. Construction BMPs would control sediment transport. Therefore, impacts to water quality are expected to be minor and temporary.	No impact on water quality.
How would the Proposed Action affect wetlands, riparian areas, and floodplain?	No wetlands occur within the Project ROW. The Project ROW crosses the American Fork River and floodplains. The American Fork floodplain supports a primarily upland vegetation community consisting of sagebrush and rabbitbrush. Vegetation in the floodplain and would be temporarily disturbed during construction activities. The ephemeral drainages within the American Fork floodplain would be temporarily disturbed by construction activities. The USACE and Utah Division of Water Rights stipulations would be followed during constructions activities to minimize disturbance and to ensure that all impacts are temporary. The ROW would be	No impact on wetlands, riparian areas, and floodplain.

Issue	Proposed Action Alternative	No Action Alternative
	reclaimed upon completion of construction. All necessary permits would be obtained prior to construction in the American Fork River and associated floodplains.	
Fish and Wildlife including general wildlife, big game, migratory birds, raptors, and special status species (i.e. USFWS federally listed species, Forest Service Region 4 Sensitive species, UNF Management Indicator Species, and State of Utah Wildlife Species of Concern or Conservation Agreement Species)		
How would the Proposed Action affect fish and wildlife habitat and special status fish and wildlife species?	No federally listed wildlife species are known to occur in or near the Project ROW. Other special status species with the potential to occur are considered in the analysis. Construction activities would temporarily alter habitat, but would occur within and directly adjacent to a previously disturbed Project ROW. The Project ROW is surrounded by residential and recreational development. Increased human activity, noise, and dust during construction could alter wildlife behavior and distribution in the short-term; however, species occurring in and around the Project ROW are likely acclimated to the presence of humans and associated activities. The Proposed Action could contribute suspended solid concentrations (e.g. sediment) from disturbed soil surfaces into the American Fork River, which could affect fish species; however Project activities are is anticipated to occur when little or no water is flowing in American Fork River. Migratory bird mitigation measures, dust and erosion control BMPs, and successful reclamation would eliminate or minimize impacts to fish and wildlife.	No impact on fish and wildlife species, as no construction activities would occur.
Archaeological, Cultural and Historic Resources		
How would the Proposed Action affect archaeological, cultural and historic resources?	The Proposed Action would occur within a previously disturbed ROW. A cultural resources file search and Class III resources inventory was conducted for the Project area. The proposed pipeline replacement will intersect one NRHP eligible site, the American Fork Canyon Ditch. This site has been previously cut and revegetated from the initial	No impacts to archaeological, cultural or historic resources.

Issue	Proposed Action Alternative	No Action Alternative
	construction of the FL 24 pipeline. At present, there is no evidence of a previous ditch crossing. The Proposed Action will not adversely affect any historic properties as long as the ditch is restored to its preconstruction state.	
Air Quality		
How would fugitive dust associated with construction affect air quality? How would mobile source emissions associated with construction activities affect air quality in the vicinity of the Project?	Construction activities associated with the Proposed Action would generate some fugitive dust; vehicles and equipment would produce combustion emissions. Questar would implement Project BMPs to control or minimize construction-generated fugitive dust. Vehicles and equipment would operate under manufacture emissions controls and State requirements. The amount of emissions generated by construction equipment and vehicles would be minor. Short-term, minor impacts to air quality would occur.	Air quality would remain as is currently in the area. No construction activities would take place.

Public Health and Safety (including transportation, fire, and hazardous and solid waste)		
Issue	**Proposed Action Alternative**	**No Action Alternative**
How would the Proposed Action affect public health and safety?	Construction workers and equipment present in the Project area increase risk of fires; Questar would implement the Project Fire Prevention and Control measures to reduce risk of fire. Presence of natural gas in existing pipeline and use of new line to convey natural gas requires proper depressurization and testing. The Project is located adjacent to residential and recreational areas increasing the likelihood of Project trespass. Construction areas will be clearly identified. Signs and temporary fencing will be used as needed in areas that pose a risk to human safety.	No impact on public health and safety.
What types of waste would be produced?	Construction activities and decommissioning of the existing pipe would produce general construction waste. Implementation of Questar BMPs during construction activities, which would include the proper handling and disposal of construction waste, would eliminate any potential impacts to public health and safety.	No wastes would be produced; therefore there would be no impact to public health and safety.

3 Affected Environment and Environmental Consequences

3.1 Introduction

This chapter provides the baseline description of the existing environment in terms of the physical, biological, and human resources, and conditions which may be affected by the Proposed Action and No Action alternatives. The description is structured by resource/discipline. This establishes the background for discussion of the direct, indirect, and cumulative environmental consequences of implementing the Proposed Action and No Action alternatives. The analysis of effects (direct, indirect and cumulative) for the Proposed Action and the No Action alternatives on resources is required by NEPA, National Forest Management Act (NFMA), other applicable laws and regulations, Forest Service directives, and the Forest Plan. The chapter is organized by resource discipline. The chapter concludes with discussion of other disclosures required by NEPA or other agency regulations or policies.

Impacts and effects are used interchangeably throughout this report and have the same meaning. The following terms will be used to describe effects:

- **No Effect:** A change to a resource's condition, use, or value that is not measurable or perceptible.
- **Beneficial Effect:** An action that would improve the resource's condition, use, or value compared to its current condition, use, or value.
- **Minor Adverse Effect:** A measurable or perceptible localized degradation of a resource's condition, use, or value that is of little consequence.
- **Moderate Adverse Effect:** A localized degradation of a resource's condition, use, or value that is measurable and of consequence.
- **High Adverse Effect:** A measurable degradation of a resource's condition, use, or value that is large and/or widespread and could have permanent consequences for the resource.
- **Short-term Effect:** An effect that would result in the change of a resource's condition, use, or value lasting less than one year.
- **Long-term Effect:** An effect that would result in the change of a resource's condition, use, or value lasting more than one year and probably much longer.

Effects will also be described in terms of direct and indirect effects:

- **Direct Effects:** Caused by the action and occur at the same time and place.
- **Indirect Effects:** Caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.

Cumulative effects were also analyzed and are defined as:

- **Cumulative Effects:** The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (40 CFR 1508.7).

<u>Past Actions (includes construction and use of utilities):</u>

- Questar FL 24 pipeline
- American Fork Canyon Ditch
- Electrical power line(s)
- Salt Lake Aqueduct

Present Actions (includes use and maintenance of existing utilities):

- American Fork Canyon Ditch
- Electrical power line(s)
- Salt Lake Aqueduct

Reasonably Foreseeable Future Actions (includes use and maintenance of existing utilities):

- American Fork Canyon Ditch
- Questar FL 24 Pipeline – replacement of segments located east and west of Proposed Action.
- Electrical power line(s)
- Salt Lake Aqueduct

3.2 Project Area General Description

The Project occurs three-quarters miles west of American Fork Canyon along the base of the Wasatch Mountains that form the Wasatch Front. Elevation in the Project is approximately 4,900 feet. Based on Southwest Regional Gap Analysis (SWReGAP) geographic information system (GIS) data, the land cover identified in the Project area consists of Invasive Perennial Grassland dominated by introduced perennial grass species, Inter-Mountain Basins Big Sagebrush Shrubland and Sagebrush Steppe dominated by big sagebrush, (*Artemisia tridentata*), and Rocky Mountain Bigtooth Maple Ravine Woodland dominated by big tooth maple (*Acer grandidentatum*) (SWReGAP, 2013). At the Project-area scale, the ROW is currently vegetated by bunchgrasses, annual and perennial forbs, and weed species with pockets of sagebrush, rabbitbrush (*Chrysothamnus vicidiflorus*), mountain mahogany (*Cerocarpus montanus*) and maple species (*Acer* spp.).

The American Fork River, which flows through American Fork Canyon with water originating from high in the Wasatch Mountains, is within the Utah Lake watershed. From the Wasatch Mountains, the American Fork River flows west through American Fork Canyon; once the river exits the canyon, it flows west through mostly flat terrain, passing through the city of Highland, and finally draining into Utah Lake.

3.3 Disturbance Types and Areas

Table 3-1 provides the basic dimensions of disturbance associated with the Proposed Action.

Table 3-1: Disturbance Types and Areas

Project Type	Disturbance Dimensions	Disturbance Type
Pipeline ROW	0.29 miles long by 75 feet wide (2.6 acres)	Clearing and grading, vegetation removal, trenching, and equipment/materials staging.
Access Roads	Use existing access roads in the vicinity of Project.	Construction traffic use of existing unpaved access roads.
Staging Areas	Existing disturbed sites off of ROW or within final or temporary ROW.	Placement of equipment/materials in previously disturbed areas or approved final and temporary ROW.

3.4 Vegetation Resources

3.4.1 Scope of Analysis

Internal, interdisciplinary review and scoping identified the following issues addressed in this analysis:

Issue 1: How would the Proposed Action affect vegetation and special status plant species?

Background: Vegetation in the ROW would be cleared under the Proposed Action, affecting existing vegetation. The area surrounding the Project ROW is primarily composed of residential development and developed open space. The ROW has been previously cleared and re-vegetated during the initial phase of FL 24 construction. Bunchgrasses, forbs, shrubs, and small trees currently grow in the ROW.

Indicators: Suitable habitat for rare plant species and rare plant communities has been surveyed on the UWCNF as per Forest Plan. The information is collected to assist in the evaluation of the effects of proposed projects on vegetation. Data has been collected for the following: USFWS federally listed threatened, endangered species and Forest Service Region 4 sensitive species.

Surveys for USFWS federally listed species, Forest Service Region 4 sensitive species and a general vegetation composition survey was conducted in 2013 within the Project area (Cardno ENTRIX 2013b). Habitat for and individuals of federally listed plant species and species included on the Forest Service Region 4 sensitive species list do not occur.

Analysis Area: Analysis of direct effects focuses on areas of proposed disturbance within the Project area. Indirect and cumulative effects are addressed at the scale of the immediate areas (0.05 mile) around the Project area.

Issue 2: How would the Proposed Action affect the spread of invasive and noxious weeds?

Background: There were no noxious weeds observed within the ROW during the 2013 survey. Recent observations by UWCNF botanist indicated Dalmatian toadflax *Linaria dalmatica,* Field bindweed (*Convolvulus arvensis)* and Houndstongue (*Cynoglossum officinale)* currently exist adjacent to and within portions of the ROW. These identified weeds within the ROW would be treated prior to any construction activity. Vegetation in the ROW would be cleared, disturbing existing plant species and creating areas of bare soil where weeds may establish. Use of construction equipment would be limited to the ROW thereby eliminating potential to track weed seeds onto the ROW. Questar would implement the FL 24 Noxious and Invasive Weed Management Plan in order to further monitor, control and reduce any risk of weed infestation.

Indicators: A survey for noxious weeds and invasive species was conducted in 2013 within the Project area. No noxious or invasive weeds were documented within the Project area at that time. Dalmatian toadflax (*Linaria dalmatica*) was documented in the vicinity of the ROW (Cardno ENTRIX 2013b).

Analysis Area: Analysis of direct effects focuses on areas of proposed disturbance within the Project area. Indirect and cumulative effects are addressed at the scale of the immediate areas (0.05 mile) around the Project area.

3.4.2 Affected Environment and Environmental Consequences

The Standards and Guidelines regarding vegetation management in the Forest Plan state that vegetation should be managed to mimic the natural pattern, structure, and composition of vegetation on the landscape (Veg-13). The existing landscape structure and pattern of the surrounding sagebrush shrubland is atypical of that described as the desired condition for these communities in the Forest Plan (USDA Forest Service 2003a) given the ROW's lack of overall vegetative diversity, vegetative succession, vegetative age-class composition, and non-native annual grasses like cheatgrass (*Bromus tectorum*), are increasing in cover.

The previously disturbed ROW runs through a mosaic of disturbed scrub and ephemeral wash native vegetation communities bordered by residential development and open space dispersed recreational use. Since its original construction, the ROW has been reclaimed and is vegetated by sagebrush, rabbitbrush, mahogany shrubs, small maple trees, and common bunchgrasses, annual grasses, and forbs. The soil has stabilized and vegetation growth is successful, but it is not likely that the area would return to a pre-disturbed state due to its position in the landscape and proximity to urban development. This is typical of

utility ROWs due to management directives, seed mixes applied, length of time since initial disturbance, and length of time between repeated disturbance events.

Affected Environment: General Vegetation

The Project occurs along the western base of mountains that form the Wasatch Front directly west of American Fork Canyon. The Project is in a partially disturbed state and is completely surrounded by residential, industrial and transportation development and open space dispersed recreational use. The Project is located within and directly above, the primary floodplain of the American Fork River. The Project ROW is sparsely vegetated by sagebrush, rabbitbrush, mahogany shrubs, maple trees, grasses and forb species. The floodplain includes sparse rabbitbrush, mahogany shrubs, and maple species. No other wetland communities are present within the ROW.

Past reclamation activities have resulted in a ROW that has become re-vegetated by native species including sagebrush, rabbitbrush, mahogany shrubs, and maple trees. Invasive and noxious weed species have also established in the general area, and only recently observed in limited locations within the ROW. Several unauthorized roads and trails are present within the ROW and in the immediate vicinity.

Environmental Consequences: General Vegetation

Direct and Indirect Effects: Proposed Action Alternative

Vegetation clearing would initially result in a short-term highly adverse direct effect. The initial removal of vegetation within the ROW would result in an evident change in existing conditions. However, with implementation of reclamation practices included in the Proposed Action, the direct and indirect impact to general vegetation would shift to minor and long-term. The impact would be considered minor based on the change in existing vegetative structure and the pre-disturbance condition of the vegetation and long-term because re-vegetation success typically occurs over several years. A long-term beneficial effect would occur as re-vegetation efforts successfully replace less desirable species with more desirable reclamation species. These long-term beneficial effects would only occur if undesirable species (including noxious and invasive species) occurring within the ROW are removed and controlled within the ROW. This will be accomplished by pre-treatment and successful re-vegetation along with implementation of BMPs in the FL 24 Noxious and Invasive Weed Management Plan.

Direct and Indirect Effects: No Action Alternative

The No Action Alternative would have no effect on general vegetation in the Project area. Disturbance activities would not occur and vegetation composition in the ROW would neither be destroyed nor enhanced.

Cumulative Effects

There would be no cumulative effect on general vegetation when considered with other past, present, and reasonably foreseeable future actions. Vegetation in the ROW has been altered from the surrounding undisturbed plant communities and would continue in this state regardless of the Proposed Action. Other past, present, and foreseeable future actions considered in this analysis would not combine with effects of the Proposed Action to result in cumulative effects to vegetation.

Affected Environment: Special Status Species

This section discusses special status plant species, which includes USFWS federally listed species for Utah County and Forest Service Region 4 sensitive plant species.

The Endangered Species Act (ESA) of 1973, as amended, requires federal agencies to ensure that any activities they authorize, fund, or carry out, do not jeopardize the continued existence of any species

federally listed, or proposed for listing, as threatened or endangered (Section 7). Consultation with the USFWS is required if threatened or endangered species or their critical habitat may be affected by proposed actions. Forest Service Manual 2670 provides additional management direction for threatened, endangered, and sensitive plants.

Plant species determined by the USFWS to be threatened or endangered are protected under the ESA, the term "endangered" is defined as a species in danger of extinction throughout all or a significant portion of its range; and "threatened species" are likely to become endangered species in the foreseeable future throughout all or a significant portion of their range. Significant adverse effects to a federally listed species or its habitat require consultation with USFWS under Section 7 of the ESA. Of the three USFWS Listed plant species, two were not considered since the Project area does not contain habitat or the species is not known to occur within the Project area. One species was considered for detailed analysis, shown in Table 3-2 below.

Table 3-2: USFWS Listed Plant Species Considered for Detailed Analysis

Species	Habitat	Habitat in the Project Area and Consideration for Analysis
Ute ladies'-tresses *Spiranthes diluvialis* **USFWS Threatened Species**	Riparian edges, gravel bars, old oxbows, high flow channels, moist to wet meadows along perennial streams, stable wetland and seepy areas associated with old landscape features within historical floodplains of major rivers, wetland and seepy areas near freshwater lakes or springs. (USDI Fish and Wildlife Service 2013a).	**Considered.** Known to occur in Utah County along streams, rivers, and wetland areas near Utah Lake and American Fork River drainage. (Fertig 2005).

The Forest Service has developed policy regarding the designation of sensitive plant and animal species (FSM 2670.32). A sensitive species is defined as those plant and animal species identified by the Regional Forester for which population viability is a concern as evidenced by: 1) significant current or predicted downward trends in population numbers or density or 2) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution (FSM 2670.5). The Forest Service established the sensitive species list on a regional basis under the authority of the NFMA to ensure species of concern are protected from potential listing under the ESA.

Of the 13 Forest Service Region 4 sensitive plant species, 12 of them were not considered for further analysis because habitat for the species is not present in the Project area or habitat for the species is present but the species does not occur in this area. One species was considered for detailed analysis, shown in Table 3-3 below.

Table 3-3: USFS Sensitive Plant Species Considered for Detailed Analysis

Species	Habitat	Habitat in the Project Area and Consideration for Analysis
Wheeler's Angelica *Angelica wheeleri*	Boggy or very wet areas, often in riparian communities or near seeps and springs at 4,800 to 9,700 ft. (UDWR 2013c)	**Considered.** Known to occur in UNF and Utah County in suitable habitat. (USDA Forest Service 2003b, UDWR 2013c)

Environmental Consequences: Special Status Species

Direct and Indirect Effects: Proposed Action Alternative

One USFWS listed plant species and one USFS Region 4 sensitive plant species were considered for detailed analysis. None of these plant species, or suitable habitat capable of supporting these species, was detected during the general vegetation survey conducted in 2013. The species are not likely to occur, as suitable habitat for either of these species does not occur within the ROW. There would be no impacts to either of the USFWS listed species or USFS Region 4 sensitive species with implementation of the Proposed Action.

Direct and Indirect Effects: No Action Alternative

The No Action Alternative would have no impact on special status plant species. Construction activities associated with pipeline replacement would not occur.

Cumulative Effects

There would be no cumulative impact on special status plant species. Proposed disturbance would not cause direct or indirect impacts to individuals, and would therefore not combine with past, present, or reasonably foreseeable future actions to result in a cumulative effect.

Affected Environment: Noxious Weeds and Invasive Species

No noxious weed species were identified within the Project ROW during the 2013 survey. Dalmatian toadflax was identified outside the Project ROW to the north of the Project area. Recently noxious weeds were identified on the ROW. A Noxious and Invasive Weed Management Plan has been prepared with measures to identify, control and monitor to minimize the risk of weed infestations for the life of the ROW.

Environmental Consequences: Noxious Weeds and Invasive Species

Direct and Indirect Effects: Proposed Action Alternative

Vegetation clearing and grading would occur throughout the Project ROW. This would result in bare ground and involve the use of construction equipment, allowing for the spread of existing noxious weeds and invasive species, and the possible establishment of new weed populations within disturbed areas. Once established, weeds could also potentially spread into adjacent native plant communities, resulting in a long-term, highly adverse impact.

To combat the spread and establishment of noxious and invasive weed species in the Project area, Questar would follow BMPs outlined in the Noxious and Invasive Weed Management Plan including weed control prior to and after construction. BMPs include:

- Clean all equipment of dirt and vegetative material prior to transport into the project area
- Sediment retention structures will be composed of either a synthetic material or certified weed-free straw.
- Re-establish vegetation in disturbed areas with a seed mix that has been approved by the Forest Service, as soon as practicable following disturbance.
- Monitor re-vegetated areas by inspections until 70 percent of the desired vegetative cover has established.

Under the Proposed Action Alternative the weed management BMPs would be implemented. With implementation of the Proposed Action, no impact to the Project area and the immediate vicinity would occur if weed management and re-vegetation BMPs are followed and weed species are not allowed to become established in the ROW following construction.

Direct and Indirect Effects: No Action Alternative

The No Action Alternative would have no effect on vegetation communities in and around the Project area. Disturbance activities would not occur and vegetation composition in the ROW would neither be destroyed nor enhanced. Under the No Action Alternative the existing noxious weed populations in the vicinity would continue to reproduce and could expand in the area.

Cumulative Effects

Previous disturbance-causing activities and proximity to developed areas and transportation ROWs have caused weed invasions and weed populations to spread in the vicinity of and into the ROW. The beneficial, long-term direct effect of implementing weed management BMPs (Appendix B) in the ROW would result in a cumulative beneficial impact when considered with respect to past, present, and potential future management actions and disturbance activities. Weed populations that may spread into the Project ROW would be managed to enhance vegetation health overall and reduce the potential for future disturbance activities to negatively affect existing vegetation through weed invasions. By following BMPs outlined in the Noxious and Invasive Weed Management Plan including weed control prior to and after construction as a component of the Proposed Action along the ROW, the Project would not result in the further spread of noxious weeds.

3.5 Geology and Soil Resources (including geotechnical hazards)

3.5.1 Scope of Analysis

Internal, interdisciplinary review and scoping identified the following issues addressed in this analysis:

Issue 2: How would the Proposed Action affect soils?

Background: The Proposed Action may negatively affect soil conditions by causing compaction and erosion, which may further result in decreased soil productivity. Should construction activities result in soil loss via downslope transport of disturbed surfaces, water quality could also be affected.

Indicators:

- Soil type, soil properties, intensity of disturbance
- Acreage of disturbance by soil type

Analysis Area: Analysis of direct impacts focuses on disturbance areas associated with the Proposed Action. Indirect and cumulative impacts are addressed at the scale of 0.05 mile in the vicinity of the Proposed Action.

3.5.2 Affected Environment and Environmental Consequences

The Project area is located in north-central Utah approximately three-quarters miles west of American Fork Canyon along the base of the Wasatch Mountains that form the Wasatch Front. The Wasatch Mountain Range is a north-south trending mountain range with numerous small canyons cut into the slopes on both sides of the range. Generally, the western side of the range consists of steeper slopes than the eastern side as a result of displacement along the still active Wasatch Fault. The Project area is located below American Fork Canyon, which is a large east-west trending canyon in the Wasatch Range that is occupied by the American Fork River.

Based on review of digital geologic map data (Utah Geological Survey, 2013) and position of the Project area, the underlying bedrock geology likely consists of Great Blue Limestone. Surface geology of the Project area consists of Lake Bonneville alluvial-fan and delta deposits, Stream-terrace alluvium, and Stream and floodplain alluvium occurring as surficial alluvial deposits associated with the American Fork River.

Affected Environment: Soils

Soil information for the Project was obtained from digital map data and associated databases developed by the National Cooperative Soil Survey and distributed by the USDA Natural Resources Conservation Service (NRCS), including the Soil Survey Geographic Database (SSURGO) and Digital General Soil Map of the U.S. (also known as STATSGO2). Soils in any one association differ in slope, depth, stoniness, drainage, and other characteristics (USDA NRCS 2013). Because of differences in the scale and map units of SSURGO versus STATSGO2 data, soil baseline characterization is reported separately by data source. Table 3-5 provides a summary of the soil types within the Project area as derived from SSURGO and STATSGO2 digital map data. Table 3-5 also describes the permeability, drainage, and runoff characteristics of each soil unit, as well as its susceptibility to erosion. These characteristics may also indicate the potential for compaction effects.

Table 3-4: Description of Soil Map Units in the Project Area (USDA NRCS 2013)

Soil Map Unit (Code)	Slope (%)	Description	Project Feature
SSURGO Map Units			
Bingham gravelly loam BkB	1 to 3	Soil occurs on alluvial fans. Parent materials are alluvium and/or lacustrine deposits derived from mixed sources. It is well drained, rated as moderately high to high to transmit water, and rated as medium runoff. Soil is neither frequently flooded nor frequently ponded. Does not meet hydric criteria.	ROW
Cobbly alluvial land CU	na	Soil occurs on floodplains. Parent materials are lacustrine deposits derived from mixed sources. It is poorly drained and rated as high to transmit water. Soil is indicated as frequently flooded, but never ponded. Depth to water table is high. Soils meet hydric criteria (USDA NRCS 2012).	ROW
Hillfield-Sterling complex HOF	20 to 35	Occurs on gently sloping lake terraces or escarpments. Parent materials are lacustrine deposits derived from mixed sources. Soils are identified as well drained, rated as moderately high in its capacity to transmit water, and rated medium to rapid runoff. Soil is indicated as neither frequently flooded nor ponded. Does not meet hydric criteria.	ROW
Riverwash RV	na	Occurs on river floodplains. Parent material consists of alluvium derived from sandstone or quartzite. It is poorly drained and indicated as high in its capacity to transmit water. Seasonal flooding and high water table are possible. Meets hydric criteria (USDA NRCS 2012)	ROW

Soils are distributed in a manner such that the Proposed Action crosses perpendicular to the soils identified above. The eastern portion of the Project area is located within the Cobbly alluvial land soil unit. From the east, the Proposed Action trends through the Riverwash soil unit associated with the American Fork River, again through Cobbly alluvial land soil unit in the American Fork River floodplain, into a narrow band of Hillfield-Sterling complex functioning as the western terrace of the American Fork River, and terminates on the western end in Brigham gravelly loam soil unit above the American Fork River floodplain.

Environmental Consequences: Soils

Table 3-6 shows acreage of disturbance by soil type calculated for the proposed Project disturbance areas (i.e., ROW).

Table 3-5: Acres of Disturbance by Soil Unit

Soil Map Unit (Code)	Acres Disturbed
Bingham gravelly loam (BkB)	**0.5**
Cobbly alluvial land (CU)	**0.8**
Hillfield-Sterling complex (HOF)	**0.2**
Riverwash (RV)	**0.5**

Soil characteristics, such as percent slope, texture, shrink-swell potential and drainage ability, may be used to estimate the potential for compaction and erosion impacts. The rate and extent at which erosion occurs is dependent upon the nature of the soil and the type and amount of vegetation growing in the soil. Erosion may be accelerated by human-caused disturbances, especially if disturbance activities occur in soil types more susceptible to erosion. Nutrients lost through soil erosion may result in decreased site productivity. The majority of the Project area occurs over soils that are classified as having a medium or rapid runoff potential, likely associated with the soils' relationship with erosional factors of the American Fork River drainage.

Soil compaction is a reduction in soil pore spaces which results in an overall decrease in soil porosity. Compaction can lead to decreased water infiltration, which reduces moisture available to plants and impedes root penetration through the soil. The loss of infiltration capacity further exacerbates runoff velocity and increases the potential for erosion. The surface layers of soil also contain the most nutrients, and when these surface layers are removed the productivity of a soil is greatly diminished. Coarser soils (i.e., sand and loam) are more prone to compaction. Soils in the Project area that may be susceptible to compaction include Bingham gravelly loam and Hillfield-Sterling complex.

Removal of top soil may affect productivity. Nutrients in the surface layers are in a form that is readily available for plant uptake. The deeper soil horizons also contain nutrients, but these are often less available for plants to use. Nitrogen, the primary limiting nutrient for plants, is only found in the soil‘s surface layers.

Construction would include specific management strategies to limit effects on soils such as erosion, compaction, and loss of soil productivity. The control measures would also prevent further effects to resources such as water quality. Site preparation would involve the ROW being cleared of vegetation and graded. Temporary sediment barriers, including silt fencing and waddles composed of synthetic material, would be placed along the edges of the construction corridor to prevent sediment delivery from disturbed areas as well as to divert water away from the construction area. Temporary sediment barriers would be installed immediately after initial ground disturbance.

Topsoil would be segregated in the ROW to a depth of 3 to 6 inches in areas where construction activity could occur. Where it is possible to remove and stockpile topsoil, it would be placed along the edge of the ROW and segregated by a one-foot gap, or an erosion control matting barrier, from subsoil.

Once the pipeline has been backfilled cleanup operations would commence. The ROW fill material would be replaced as near as practicable to pre-construction conditions. In locations where material had sloughed onto the ROW corridor, the material would be replaced in an attempt to reinforce the material above it and prevent future soil movement. ROW fill material would be bucket compacted following replacement in the best manner possible to ensure soil stabilization. Any topsoil that was salvaged would be replaced and the final grading of the ROW would be completed.

Any erosion control measures that must be left in place until the area is re-vegetated would be left in good condition and monitored for effectiveness. The ROW would be reseeded with a Forest Service-approved, USDA seed lab-certified seed mix. Soil stabilization measures would be implemented, such as temporary mulching of spoil piles and placement of erosion mats following final seeding.

Work along the ROW would occur in an efficiently sequenced manner to reduce the potential for soil compaction by limiting the duration that heavy equipment is left in any one place. Clean-up and reclamation activities would include preparing the seed bed by roughing the surface, thus alleviating any compaction.

The pipeline replacement activities would disturb soils in the Project area. Implementation of the Proposed Action would likely result in a short-term moderate impact to the soil resources. Disturbance would be limited to the ROW, with little impact to existing staging areas and the existing roads that would be used for access. Erosion control measures would minimize the potential for soil loss and movement downslope. Monitoring of the disturbed areas would take place until re-vegetation is adequate to stabilize soils. Re-vegetation and weed control is detailed in Section 3.4 - Vegetation Resources.

Soil compaction and nutrient loss would be mitigated by adhering to the BMPs included in the Proposed Action. One such BMP includes keeping top soil separate and returning it to the surface after the trench has been backfilled. The erosion control methods to be employed would also limit runoff and discharge of sediment from exposed areas of the site, thus preventing the loss of soil nutrients and sedimentation of water resources.

Direct and Indirect Effects: No Action Alternative

The No Action alternative would have no effect on soils in the Project area. There would be no replacement activities. The existing pipeline would continue to be used; however, the pipeline would eventually need to be replaced for maintenance purposes.

Cumulative Effects

Cumulative impacts as a result of the Proposed Action in consideration of the other actions in the vicinity would not occur. Other construction activities that may occur in the vicinity, during the timeframe prior to complete restoration of the Project area, would adhere to equal requirements for erosion control measures and reclamation. The control measures would decrease the likelihood of adverse conditions occurring; thus minimizing the potential for cumulative impacts.

3.6 Water Resources

3.6.1 Scope of Analysis

The scope of analysis is based on internal, interdisciplinary review and scoping. The following issues were identified and are addressed in this analysis:

Issue 1: How would the Proposed Action affect water quality in the American Fork River and the adjacent American Fork Canyon Ditch irrigation canal?

Background: The Project area is located below the mouth of American Fork Canyon along the floodplain of the American Fork River. The proposed Project has the potential to contribute sediment and other pollutants such as fuels and lubricants through construction work within the American Fork River and American Fork Canyon Ditch, runoff from adjacent disturbed soil surfaces, and hydrostatic testing. According to the State of Utah 303(d) list, this portion of the American Fork River is not listed as impaired (UDEQ DWQ 2010, EPA 2010).

Indicators:

- Disturbance within the American Fork River and American Fork Canyon Ditch
- Size, location, and type of disturbance relative to soil types
- The potential for other forms of contamination, including fuels and chemicals is assessed in qualitative terms.

Analysis Area: Analysis of the direct and indirect effects includes the Lower American Fork River and American Fork Canyon Ditch. Cumulative effects are addressed at the scale of the portions of the American Fork River Watershed and American Fork Canyon Ditch users below the Proposed Action.

Issue 2: How would the Proposed Action affect wetlands, riparian areas, and floodplains?

Background: The riparian area and floodplain of the American Fork River occur within the Project area. The 2013 survey confirmed that the riparian area and floodplain lack a water source sufficient to support the types of vegetation, soils, and hydrologic conditions of wetlands. Even if parameters of a wetland are not met, a waterway and active portions of its floodplain may still be protected under the Clean Water Act. This section addresses the potential for impacts to waters of the U.S.

Floodplains are defined as lowlands or relatively flat areas adjoining inland or coastal waters, including areas within the 100-year floodplain. The Federal Emergency Management Agency (FEMA) makes available maps showing the extent of the 100-year floodplain. These maps were reviewed for the Project area and it was found that portions of the Project area are within the 100-year floodplain (FEMA 2013).

Indicators:

- Extent of Waters of the U.S., riparian areas and floodplains in the Project area.
- Extent of ROW within FEMA 100 year floodplain

Analysis Area: Analysis of direct impacts focuses on the area of potential disturbance associated with the proposed Project. The indirect and cumulative effects are addressed at the scale of the lower American Fork River watershed.

3.6.2 Affected Environment and Environmental Consequences

The affected environment as described here is the lower American Fork River and American Fork Canyon Ditch which occurs 0.80 mile below the mouth of American Fork Canyon. The American Fork River begins in northeastern Utah County, Utah, flows west through American Fork Canyon, and then exits American Fork Canyon at Highland, UT flowing south through urbanized areas and into Utah Lake. For the purposes of this EA the lower American Fork River includes those portions downstream of American Fork Canyon. This portion of the American Fork River is approximately 7.5 miles long.

The American Fork Canyon Ditch, located above the floodplain of the American Fork River, is a functioning irrigation feature supplying water to downstream right holders in Utah County. The American Fork Canyon Ditch begins at the mouth of American Fork Canyon and trends south through urbanized areas of Highland, American Fork, and Pleasant Grove, UT. This portion of the American Fork Canyon Ditch is approximately 7 miles long.

Best available information from a variety of sources was compiled to describe the affected environment. Sources of information include the USGS, the Forest Plan and UNF Final Environmental Impact Statement, and Federal Emergency Management Agency (FEMA) floodplain maps. The results of field visits conducted in 2012 and 2013 to evaluate potential Waters of the U.S. in the Project area are included.

Affected Environment: Water Quality

Water quality refers to the physical, chemical and biological characteristics of water and how these components affect beneficial uses (e.g. fisheries, recreation, agriculture, and drinking water). Water chemistry greatly affects the diversity and quantity of aquatic life present in a stream. Existing water quality is a result of the natural characteristics of watersheds, along with management activities and natural events occurring on both public and private lands. In relation to the Project, the main pollutant of

concern would be sediment potentially entering the American Fork River from construction activities. Other potential pollutants include fuels and chemicals from spills and subsequent stormwater discharges.

The segment of the American Fork River potentially affected by the Proposed Action is in the lower American Fork River to the west of the mouth of American Fork Canyon. Construction activities will take place within a small segment (approximately 75 feet in length x 30 feet in width) of the American Fork River. Construction will be timed in the late summer after peak run-off has occurred and at a time when little or no water is flowing within the American Fork River. Construction within the American Fork River would utilize "dry" crossing techniques to minimize water quality impacts and sedimentation.

Forest-wide Standards and Guidelines within the Forest Plan that relate to the protection of aquatic and riparian management as it relates to the Proposed Action include: Limit construction and other activities affecting stream channels to those periods when such activities will have the least detrimental effect on the aquatic environment, unless emergency conditions deem otherwise (Aqua-4): Avoid equipment operation in stream courses, open water, seeps, or springs. If use of equipment in such areas is required, impacts should be minimized (Aqua-5), and Construction or maintenance equipment service areas shall be located and treated to prevent gas, oil, or other contaminates from washing or leaching into streams. Equipment working in open water and wetlands shall be cleaned prior to entry into such areas to remove gas, oil, and other contaminants (Aqua-7).

The segment of the American Fork River considered relative to the Proposed Action is not included on the State 303(d) list of impaired waters (UDEQ DWQ 2010, EPA 2010).

Sedimentation

Sediment affects water quality and the beneficial uses of water. Sediment often reaches stream channels through the process of erosion. The effect of additional sediment can be seen long after the sediment source area has been re-vegetated.

Ground disturbance may increase soil erosion rates by leaving areas of unprotected soil. The number of acres disturbed by an activity and the location of a disturbance relative to a stream channel influences the potential for sediment to affect downstream water quality.

Affected Environment: Riparian Areas

Riparian areas are generally located adjacent to streams and around natural springs, seeps, fens, and reservoirs. In arid regions, they are evidenced by a distinct change in vegetation between the surrounding uplands and the area along the top of a stream bank or immediate vicinity of a water source. Riparian areas support vegetation species less drought tolerant than upland species. Typical species may include willows, cottonwoods, alders, and maples. Due to the presence of water, riparian areas frequently receive a disproportionate amount of use from wildlife, livestock, and humans. These areas are highly productive and biologically diverse, and provide habitat for a wide variety of terrestrial and aquatic wildlife.

Riparian vegetation is located adjacent to the Project area and is typified by the presence of sparse maple trees. While sparse riparian vegetation was identified in the immediate vicinity, the Project is entirely composed of sagebrush and rabbitbrush more typical of upland environments and ephemeral washes. The field survey of the Project area did not document the presence of any riparian vegetation. Since the Project area contains primarily upland species, no impacts to UNF Forest Plan defined Riparian Habitat Conservation Areas (RHCAs) are anticipated.

Affected Environment: Waters of the U.S.

The American Fork River occurs in the Project area. The American Fork River floodplain presently support riparian areas, identified as ephemeral in nature and are presently in a disturbed state. Due to the potential for American Fork River to contribute flow to downstream jurisdictional features following a

storm event, the American Fork River would be considered jurisdictional under the preliminary jurisdictional determination request. A Joint Permit Application (Stream Alteration and Section 404) will be submitted for this project to obtain the required Stream Alteration Permit.

Environmental Consequences: Water Quality

Direct and Indirect Effects: Proposed Action Alternative

Construction would include specific management strategies to limit events such as erosion and compaction may that lead to secondary effects to water quality. Questar would utilize "dry" crossing techniques to minimize water quality impacts and sedimentation. As part of the Questar construction permit, a SWPPP would be developed. The plan would outline Project-specific erosion control measures. Temporary sediment barriers, including silt fencing and waddles composed of synthetic material, would be placed along the edges of the construction corridor and staging areas to prevent sediment transport from disturbed areas as well as to divert water away from the construction area. Temporary sediment barriers would be installed concurrent with initial ground disturbance.

Topsoil and spoil in the ROW would be stock piled within the ROW. The original ROW contour would be maintained. The opportunity to stockpile topsoil is limited due to space constraints and the shallow and rocky characteristics of soils in the area. Where it is possible to remove and stockpile topsoil, it would be placed along the edge of the ROW and contained in place by an erosion control matting barrier. Once the pipeline has been backfilled cleanup operations would commence. The ROW fill material would be replaced as near as practicable to pre-construction conditions. In locations where material had sloughed onto the ROW corridor, the material would be replaced in an attempt to reinforce the material above it and prevent future movement as directed by the construction inspector. ROW fill material would be bucket compacted following replacement in the best manner possible to ensure proper stabilization. Any topsoil that was salvaged would be replaced and the final grading of the ROW would be completed. Permanent waterbars would be constructed in any areas where additional erosion control is determined necessary.

Clean-up and reclamation activities would include preparing the seed bed by roughing the surface and fertilizer applications to improve re-vegetation success. Any erosion control measures that must be left in place until the area is re-vegetated would be left in good condition and monitored for effectiveness. The ROW would be reseeded with a Forest Service-approved and USDA seed lab-certified seed mix. Soil stabilization measures would be implemented. Erosion control mats would be applied to slopes greater than 30 percent and other sensitive sites (i.e., dry, sandy, steep slopes) identified as having the potential for accelerated erosion.

Best Management Practices

Erosion and sediment control BMPs that would be implemented to retain soil on site may include, but are not limited to:

- Placement of silt fences along waterways and drainage areas;
- Placement of bentonite clay plugs in trenches to isolate flowing water;
- Placement of stockpiling materials set-back from working area; and
- Re-vegetation of disturbed areas following construction.

Erosion and sediment controls would be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. All controls would be maintained until final stabilization controls have been installed. Temporary perimeter controls would be removed after reclamation efforts have been completed. If sediment escapes the construction site, off-site accumulations of sediment would be removed in order to minimize off-site impacts.

Stormwater Discharges

The UPDES permit regulates and authorizes stormwater discharges to waters of the State of Utah resulting from construction activities, including construction support activities. Questar would follow the UPDES General Permit stipulations and develop the required SWPPP.

Stream Alteration

Activities that would alter the bed or banks of a natural stream, defined as a natural water way that receives enough water to develop an ecosystem that differs from the surrounding upland environment, require written authorization from the Utah Division of Water Rights State Engineer as a stream alteration permit. Project construction within the American Fork River would require approval by the State Engineer and a stream alteration permit would be obtained prior to construction within the American Fork River.

Summary of Proposed Action Direct and Indirect Effects

While the potential for sedimentation would be greater during construction, Questar would implement BMPs to control sediment transport as Project components, described herein, minimizing the potential for sediment transport impacts on water quality within the American Fork River and American Fork Canyon Ditch. Combined with proper implementation of BMPs, the potential for large inputs of sediment following storm events is low. Impacts of the Proposed Action on water quality would likely be minor to no effect.

Direct and Indirect Effects: No Action Alternative

No effects on water quality would occur under the No Action Alternative.

Cumulative Effects

The cumulative effects analysis considers other past, present, and reasonably foreseeable future activities in lower American Fork River which may affect the American Fork River watershed. Cumulative effects of the Proposed Action are not anticipated and not likely to directly or indirectly impact water quality given implementation of the Project components described herein.

Environmental Consequences: Riparian Areas

Riparian areas do not occur in the Project area therefore, there would be no direct, indirect, or cumulative effects to riparian areas associated with implementing the Proposed Action or its alternative.

Environmental Consequences: Waters of the U.S.

The Proposed Action would not result in the permanent loss of waters of the U.S. Erosion control measures included as part of the Proposed Action would be implemented. Additionally, Questar will obtain stream alteration permit from the Utah Division of Water Rights prior to construction. There would be no permanent effect to waters of the U.S. as a result of the Proposed Action or alternatives.

3.7 Fish and Wildlife Resources

3.7.1 Scope of Analysis

A Biological Resources Survey was completed and prepared to review the U.S. Fish and Wildlife listed species, Forest Service Region 4 Sensitive Species, UNF MIS, and State of Utah Wildlife Species of Concern or Conservation Agreement Species that may occur in the Project area and determine whether impacts on these species are anticipated that would adversely affect their viability.

Regulatory Compliance Framework

The Endangered Species Act (ESA) requires federal agencies to ensure that any activities they authorize, fund, or carry out do not jeopardize the continued existence of any species federally listed, or proposed

for listing, as threatened or endangered (Section 7). Consultation with the USFWS is required if threatened or endangered species or their critical habitat may be affected by proposed actions.

The NFMA regulations direct National Forests to identify Forest Service MIS, which are, "….selected because their population changes are believed to indicate the effects of management activities" (CFR 219.19 (a) (1) (USDA Forest Service 2003b). MIS are species that are utilized in monitoring specific habitat types. MIS are monitored annually in an attempt to identify population trends. These trends are believed to reflect the condition of specific habitats as well as the effects of forest management activities.

The Forest Service has developed policy regarding the designation of sensitive plant and animal species (FSM 2670.32). A sensitive species is defined (FSM 2670.5) as those plant and animal species identified by the Regional Forester for which population viability is a concern as evidenced by: 1) significant current or predicted downward trends in population numbers or density or 2) significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. The Forest Service established the sensitive species list on a regional basis under the authority of the NFMA to ensure species of concern are protected from potential listing under the ESA.

By Administrative Rule R657-48, the Utah Department of Natural Resources, Utah Division of Wildlife Resources (UDWR) maintains the *Utah Sensitive Species* list, which contains wildlife and fish species that are USFWS federally listed, candidates for listing, or for which a conservation agreement is in place. Additional species are added to the list as "species of concern" where there is credible scientific evidence to substantiate a threat to continued viability of populations of such species.

The Migratory Bird Treaty Act enacted in 1918 was established to protect migratory birds. The act makes it illegal to pursue, hunt, take, capture, kill, or possess migratory birds or any part, nest, or egg of any such bird. The Bald and Golden Eagle Protection Act (BGEPA) enacted in 1940 provides additional protection to bald and golden eagles.

Internal interdisciplinary review and scoping identified the following issue addressed in this analysis:

Issue: How would the Proposed Action affect fish and wildlife habitat and special status fish and wildlife species?

Background: The areas within and immediately surrounding the Project ROW likely support a variety of fish and wildlife species, but may be limited compared to other areas within the UWCNF due to urban development and human interactions. Based on the Utah Natural Heritage Program's (UNHP) review of the existing data in the Utah Division of Wildlife Resources' central database, no USFWS federally listed species are known to occur in the immediate vicinity of the Project area (UNHP 2013); however, historic documentation of the yellow-billed cuckoo was noted within one-mile of the Project area. Several species included on the Forest Service Region 4 sensitive species list, Forest Service MIS, or other species of concern lists may occur in or near the Project ROW and could potentially be affected by Project activities. The proposed construction activities would temporarily alter habitat, but would occur within the previously disturbed Project ROW. Increased human activity during construction could directly affect wildlife behavior and distribution in the short-term. The Proposed Action could contribute suspended solid concentrations (e.g. sediment) from disturbed soil surfaces into the American Fork River, which could indirectly affect fish species.

Indicators: The Forest Plan directs, as an objective, the monitoring of fish and wildlife species of federal, state, and local interest and their habitat across the Forest for use in evaluating the effects of proposed Projects on species and their habitat. The Forest Service collects data for the following: USFWS federally listed threatened, endangered, candidate, and proposed species, Forest Service sensitive species and MIS, and other fish and wildlife species such as big game animals and migratory birds. To appropriately identify these species, or habitats capable of supporting these species, a Project-specific survey for these listed wildlife species was conducted in 2013.

Surveys for USFWS federally listed species, Forest Service Region 4 sensitive species, and Forest Service UNF MIS were conducted in 2013 within the Project Area (Cardno ENTRIX 2013b). A description of those species identified as having the potential of occurring within the Project ROW are discussed below. Those species identified as having no likelihood of occurring, and rationale for exclusion from detailed analysis, are briefly discussed below and discussed in the Protected Biological Resources Survey Report included in Appendix C.

Analysis Area: Analysis of direct impacts focuses on areas of proposed disturbance within the Project area. Indirect and cumulative impacts are addressed within those areas 0.05 mile of the Project area.

3.7.2 Affected Environment and Environmental Consequences

Affected Environment: General Wildlife and Big Game Species

A large variety of general wildlife and big game species inhabit the UNF, utilizing a variety of vegetation communities and aquatic habitats. The Project is located within the American Fork management area of the UNF. The American Fork management area provides a wide variety of important wildlife habitat, from alpine habitat in the Lone Peak Wilderness Area to forested riparian in American Fork Canyon. The most extensive habitat types include oak/maple, conifer forest (primarily spruce/fir), and aspen forest (USDA, Forest Service 2003a). The Project area is surrounded by residential, transportation corridors and industrial development with limited open space. The Project area consists of a generally disturbed native vegetation community and would be considered marginal wildlife habitat. The Project area and undeveloped areas around the Project area would likely support commonly occurring avian species, small mammals, and reptiles.

Big game species that may occur in the Project area includes mule deer (*Odocoileus hemionus*). Mule deer would be expected to occur within the Project as rare visitors. No other big game species are expected to occur in the Project area due to the Project area's position in the urban landscape. Mountain goats (*Oreamnos americanus*), Rocky Mountain bighorn sheep (*Ovis canadensis*), elk (*Cervus canadensis*), and moose (*Alces alces*) are known to occur within the American Fork Management Area, but are not expected to occur within or near the Project. The west slope of the American Fork Management Area provides critical and high value deer winter range and high value elk winter range (USDA USFS 2003a); however the Project is located outside these critical big game areas (UDWR 2013b). Big game species listed as Forest Service sensitive species or MIS are discussed in further detail in the Protected Biological Resources Survey Report included in Appendix C.

Affected Environment: Special Status Species and Migratory Birds

Special status species under this section include endangered, threatened, candidate, or proposed species that are listed by the USFWS for Utah County, Utah; Forest Service Region 4 sensitive species, UNF MIS; and State of Utah Wildlife Species of Concern or Conservation Agreement Species.

The USFWS, Utah Ecological Service maintains and publishes a list of federally listed species by county (*Federally Listed and Proposed Endangered, Threatened and Candidate Species and Critical Habitat In Utah – Species By County*). Five endangered, one threatened, one proposed threatened, and one candidate species are listed as occurring in Utah County (USDI Fish and Wildlife Service 2013b).

The Forest Service maintains a list of the sensitive wildlife and aquatic species by forest for the Intermountain Region (*Intermountain Region (R4) Threatened, Endangered, Proposed, and Sensitive Species, Known/Suspected Distribution by Forest*). Based on this list there are 22 sensitive wildlife and aquatic species listed for the UNF (USDA Forest Service 2013b). According to the UNF Final Environmental Impact Statement Summary, there are five MIS species within the UNF (USDA Forest Service 2003b). Of these species, eight species listed as Region 4 Forest Service sensitive species or UNF MIS were carried forward for detailed analysis and included in Table 3-8 and discussed in detail

below. Those species not carried forward for analysis, and rationale for their exclusion, is detailed in the Protected Biological Resources Survey in Appendix C.

The *Utah Sensitive Species* list that is maintained by the UDWR, lists 23 Wildlife Species of Concern and seven Conservation Agreement Species for Utah County (UDWR 2011). Table 3-7 details the list of State of Utah Wildlife Species of Concern and Conservation Agreement Species and their likelihood of occurring within the Project area.

Migratory Birds protected under the MBTA and species protected under the BGEPA may occur within the Project area as resident breeding and nesting species or as foraging and migrating visitors, depending upon the species. Suitable habitat capable of supporting breeding and nesting activities of ground and shrub nesting species protected under the MBTA is present within the Project ROW. No large trees, cliffs, or other habitats capable of supporting breeding and nesting activities associated with species protected under the BGEPA occur within the Project.

Table 3-6: State of Utah Wildlife Species of Concern and Conservation Agreement Species Identified as Occurring in Utah County, Utah and Likelihood of Occurring within the Project Area

Species	Status	Habitat	Likelihood of Occurring in Project
Birds			
American White Pelican *Pelecanus erytltrorhynchos*	SPC	Found on isolated islands in freshwater lakes or reservoirs and forage on inland marshes, lakes, or rivers. Breeding populations in Utah occur in northern portions of the state including Utah and Great Salt Lake (UDWR 2013d).	None: Suitable habitat does not exist within the Project.
Bald Eagle *Haliaeetus leucocephalus*	SPC	Occurs and nest near rivers and lakes (UDWR 2013d).	**Low**: Suitable nesting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
Black Swift *Cypseloides niger*	SPC	Occurs in riparian forests near cliffs and open areas near waterfalls and sea cliffs, and in sea caves (UDWR 2013d).	None: Suitable habitat does not exist within the Project.
Bobolink *Dolichonyx oryzivorus*	SPC	Occurs in moderate to tall vegetation in grasslands, hay lands, pastures, and wet meadows (UDWR 2013d).	**Low**: Suitable habitat does not exist within the Project. This species could occur as a rare visitor to Project.
Burrowing Owl *Athene cunicularia*	SPC	Inhabits desert and grassland environments. Includes open grasslands, especially prairie, plains, and savanna (UDWR 2013d).	None: Suitable habitat does not exist within the Project.
Ferruginous Hawk *Buteo regalis*	SPC	Occur in cliff, desert and grassland environments with open country, flat and rolling terrain in grassland or shrub steppe and avoid high elevations, forests, and narrow canyons (UDWR 2013d).	**Low**: Suitable nesting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
Lewis' Woodpecker *Melanerpes lewis*	SPC	Occurs in burned ponderosa pine forests, riparian forests, aspen groves, and oak woodlands in large diameter snags in relatively open forests with a well-developed understory (UDWR 2013d).	None: Suitable habitat does not exist within the Project. No forested areas occur within or near the Project.

Species	Status	Habitat	Likelihood of Occurring in Project
Long-Billed Curlew *Numenius americanus*	SPC	Occurs in herbaceous and riparian wetlands, near water. Nests in dry prairies, and moist meadows with an abundance of short-length vegetation (UDWR 2013d).	None: Suitable habitat does not exist within the Project.
Northern Goshawk *Accipiter gentilis*	CS	Occurs in mature mountain coniferous forest and riparian zone habitats. Nesting occurs in trees in mature forests; often nests previously used by northern goshawks or other bird species are re-used (UDWR 2013d).	None: Suitable habitat does not exist within the Project. No forested areas occur within or near the Project.
Short-Eared Owl *Asio flammeus*	SPC	Prefers herbaceous environments with open grounds near fresh and salt water marshes for nesting and feeding (UDWR 2013d).	**Low**: Suitable nesting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
Three-Toed Woodpecker *Picoides tridactylus*	SPC	Occurs in spruce, fir, pine, tamarack, and aspen forests. In Utah, this woodpecker nests and winters in coniferous forests, generally above 8,000 ft. elevation (UDWR 2013d).	None: Suitable habitat does not exist within the Project. No forested areas occur within or near this Project and the Project occurs below this species preferred elevation.
Reptile and Amphibian			
Columbia Spotted Frog *Rana luteiventris*	CS	Occurs in isolated springs and seeps that have a permanent water source, and move overland in spring and summer after breeding. During cold winter months, spotted frogs burrow in the mud and become inactive (UDWR 2013d).	**Low**: American Fork Creek runs through the Project; however this area of American Fork Creek is modified and disturbed. This species could be encountered at the Project dispersing out of American Fork Canyon.
Smooth Greensnake *Opheodrys vernalis*	SPC	Occurs in riparian, scrub-shrub, and herbaceous environments, with open space and abundance of moist vegetation (UDWR 2013d).	**Low**: American Fork Creek runs through the Project; however this area of American Fork Creek is modified and disturbed. This species could be encountered at the Project dispersing out of American Fork Canyon.
Western Toad *Bufo boreas*	SPC	Prefers slow moving streams, wetlands, desert springs, ponds, lakes, meadows, and woodlands. Inactive during cold winter months, may either dig its own burrow in loose soil or use the burrows of other small animals (UDWR 2013d).	**Low**: American Fork Creek runs through the Project; however this area of American Fork Creek is modified and disturbed. This species could be encountered at the Project dispersing out of American Fork Canyon.
Fish			
Bluehead Sucker *Catostomus discobolus*	CS	Occur in big rivers and creeks in moderate gradients with rocky riffle in both cold and warm environments. Specifically, the species occurs in the upper	None: Project is outside the known range of this species.

Species	Status	Habitat	Likelihood of Occurring in Project
		Colorado River system, the Snake River system, and the Lake Bonneville basin (UDWR 2013d).	
Bonneville Cutthroat Trout *Oncorhynchus clarki utah*	CS	Occur in the Bonneville Basin drainages of Utah and are rare throughout their historic range. Known populations occur in Bear Lake and Strawberry Reservoir (UDWR 2013d).	None: American Fork River runs through the Project; however this area of American Fork River is impounded, modified, and disturbed. This section of the American Fork River does not contain permanent water and would preclude this species from occurring within the Project.
Colorado River Cutthroat Trout *Oncorhynchus clarki pleuriticus*	CS	Occur in the upper Colorado River drainage of Utah in isolated high-elevation headwater streams (UDWR 2013d).	None: Suitable habitat does not exist within the Project. American Fork River is not a tributary of the Colorado River.
Least Chub *Iotichthys phlegethontis*	CS	Occurs naturally in Utah Lake and the Provo River, and nowhere else in the world. Although the species was once abundant in Utah Lake, it is now extremely rare (UDWR 2013d).	None: Suitable habitat does not exist within the Project. The Project is outside the known range of this species.
Roundtail Chub *Gila robusta*	CS	Occurs in the Colorado River and tributaries in shallow to deep water with a moderate gradient (UDWR 2013d).	None: Suitable habitat does not exist within the Project. American Fork River is not a tributary of the Colorado River.
Southern Leatherside Chub *Lepidomeda aliciae*	SPC	Occur in the Utah Lake and Sevier River drainages (UDWR 2013d).	None: American Fork River runs through the Project; however this area of American Fork River is impounded, modified, and disturbed. This section of the American Fork River does not contain permanent water and would preclude this species from occurring within the Project
Invertebrates			
California Floater *Anodonta californiensis*	SPC	Occurs in ponds, ditches, rivers and creeks, with shallow water levels in Utah, Tooele, Rich, and Millard Counties (UDWR 2013d).	None: American Fork River runs through the Project; however this area of American Fork River is impounded, modified, and disturbed. This section of the American Fork River does not contain permanent water and would preclude this species from occurring within the Project
Eureka Mountainsnail *Oreohelix eurekensis*	SPC	Occurs in aspen, hardwood, and coniferous forests, along rocky areas, in an elevation range between 7,500 to 8,500 ft. (UDWR 2013d).	None: Project is outside the known range of this species.
Southern Bonneville Springsnail *Pyrgulopsis transversa*	SPC	Occurs in slow moving freshwater springs and streams (UDWR 2013d).	None: Project is outside the known range of this species.
Utah Physa	SPC	Occurs only in freshwater springs,	None: Project is outside the known

Species	Status	Habitat	Likelihood of Occurring in Project
Physella utahensis		pools, and ditches in northern and central Utah (UDWR 2013d).	range of this species.
Mammals			
Fringed Myotis *Myotis thysanodes*	SPC	Occur in habitat such as sagebrush, mountain mahogany, and ponderosa pine forest and encountered in steep river valleys, large canyons, or other sites having steep and rocky terrain (UDWR 2013d).	**Low**: Suitable roosting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
Kit Fox *Vulpes macrotis*	SPC	Primarily occurs in open desert, shrubby or shrub-grass habitats. In Great Basin it occurs in shadscale, greasewood and sagebrush (UDWR 2013d).	None: Suitable habitat does not exist within this Project.
Spotted Bat *Euderma maculatum*	SPC	Occur in a variety of habitats, ranging from deserts to forested mountains; and roost and hibernate in caves and rock crevices across Utah below 9,000 ft. (UDWR 2013d).	**Low**: Suitable roosting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
Townsend's Big-eared Bat *Corynorhinus townsendii*	SPC	Occur in a rage of habitat but often found near forested areas. Caves, mines, and buildings are used for day roosting and winter hibernation (UDWR 2013d).	**Low**: Suitable roosting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
Western Red Bat *Lasiurus blossevillii*	SPC	Occur near water, often in wooded areas, with tall trees to roost in during the day. Often found near riparian wetlands when feeding. This species is extremely rare in Utah (UDWR 2013d).	**Low**: Suitable roosting habitat does not exist within the Project. This species could occur as a rare visitor to the Project.
White-Tailed Prairie Dog *Cynomys leucurus*	SPC	Inhabits open shrublands, semi-desert grasslands, and open valleys, in higher elevations and in meadows with diverse grass and herb cover (UDWR 2013d).	None: Suitable habitat does not exist within the Project.

Key: **Status**: SPC- State of Utah UDWR Wildlife Species of Concern, CA – State of Utah UDWR Conservation Agreement Species (UDWR 2011)

Upon compilation of all special status species listed for Utah County, each species was further evaluated for consideration in this analysis based on known occurrences, population distributions, and habitat suitability of the Project area. Special status species that are not known to occur or do not have habitat in the Project area, or whose habitat would not be subject to any disturbance from the Project were eliminated from detailed analysis of impacts. The rationale for including or eliminating federally listed special status species from detailed analysis is provided in the *Protected Biological Resources Survey for the Questar Feeder Line 24 Replacement Project, Utah County, Utah*, which is available at the PGRD Office in Pleasant Grove, Utah in the Project record and attached in Appendix C. Rationale for including or eliminating State of Utah Wildlife Species of Concern and Conservation Agreement species from detailed analysis is provided in Table 3-7 above. Only those special status species that occur or may occur in the Project area are addressed in detail. Of the 43 special status species, 29 were not considered for further analysis. Fourteen special status species are considered, and are discussed in Table 3-8 below.

Table 3-7: USFWS Listed Species, Forest Service Sensitive Species and Forest Service Management Indicator Species Carried Forward for Detailed Analysis

Species	Status	Habitat	Rational for Consideration
Birds			
Bald eagle *Haliaeetus leucocephalus*	Forest Service Sensitive Utah SPC	Breeding areas are commonly located near bodies of water where fish and waterfowl prey are available. Bald eagles typically nest in tall trees. Wintering areas are associated with open water, but other habitats may be used if food resources (e.g., carrion of rabbit or deer) are readily available. During non-breeding periods, they roost communally in sheltered stands of trees and are relatively social (UDWR 2013d).	**Considered.** Mature trees along Utah Lake or the Jordan River west of the Project area are expected to be used in winter for roosting and possibly in the spring for breeding and nesting. This species may occur in or around the Project area during migration/dispersal and in late fall/early winter, but would be precluded from nesting in or around the Project are due to lack of suitable nesting habitat.
Bobolink *Dolichonyx oryzivorus*	Utah SPC	Primary breeding habitat is wet meadow and secondary breeding habitat is agriculture. Migrate in winter (UDWR 2013d).	**Considered**. In Utah, occur in low abundance and in isolated patches primarily in the northern half of the state. This species may occur in or around the Project area during migration/dispersal and in late fall/early winter, but would be precluded from nesting in or around the Project are due to lack of suitable nesting habitat.
Ferruginous Hawk (*Buteo regalis*)	Utah SPC	Occur in cliff, desert and grassland environments with open country, flat and rolling terrain in grassland or shrub steppe and avoid high elevations, forests, and narrow canyons (UDWR 2013d)	**Considered.** Undeveloped sagebrush shrub lands, agriculture lands, and grasslands outside the Project are expected to be used for wintering as well as springtime breeding and nesting activities. These habitats occur north, south, and east of the Project outside the urban development. This species may occur in or around the Project area during migration/dispersal and in late fall/early winter, but would be precluded from nesting in or around the Project are due to lack of suitable nesting habitat.
Greater Sage-Grouse (*Centrocercus urophasianus*)	USFWS Candidate Forest Service Sensitive	Occurs in sagebrush plains, foothills, and mountain valleys. Sage grouse breeding and nesting generally occurs from February to April in open canopy habitat including landing strips, old lakebeds or playas, low sagebrush flats, openings on ridges, roads, cropland, and burned areas (UDWR 2013d)	**Considered.** Sagebrush habitats in Utah County are documented to support this species. Sagebrush does occur within and around the Project. The Project area contains marginal habitat, is disturbed, and isolated within urban development.
Peregrine falcon *Falco peregrinus anatum*	Forest Service Sensitive	Occurs in a very wide variety of habitats on every continent except Antarctica. This species typically nests on cliffs and ledges throughout Utah. Occasionally they nest on bridges, buildings and towers (UDWR 2013d).	**Considered.** This species are known to nest in Utah and occasionally are seen during fall migration and sometimes are a winter resident (UDWR 2013b). No cliffs or other suitable nesting habitat occur at the Project. Slate

Species	Status	Habitat	Rational for Consideration
			Canyon, a known Peregrine nesting area, occurs ~5 miles south of the Project (USFS, K. Hartman, 2013). This species could occur within the Project as a foraging visitor.
Short-Eared Owl (*Asio flammeus*)	Utah SPC	Prefers grasslands, shrublands, and other open habitats and may frequent herbaceous environments with open grounds near fresh and salt water marshes for nesting and feeding (UDWR 2013d).	**Considered.** This species preferred habitats occur west of the Project around Utah Lake, interior Great Basin landscapes, and southeastern Utah. This species may occur in or around the Project area during migration/dispersal or as a rare foraging visitor.
Mammals			
American Beaver (*Castor canadensis)*	Forest Service MIS	Occurs in streams and rivers of Utah (UDWR 2013d).	**Considered**: American Fork Creek runs through the Project; however this area of American Fork Creek is impounded, modified, disturbed, and does not support permanent water. This species could occur within the Project as a rare visitor or dispersing from areas adjacent to the Project.
Fringed myotis *Myotis thysanodes*	Utah SPC	Occur in habitat such as sagebrush, mountain mahogany, and ponderosa pine forest and encountered in steep river valleys, large canyons, or other sites having steep and rocky terrain. They inhabit caves, mines and buildings (UDWR 2013d).	**Considered**. In Utah, this species may occur within the Project as a foraging visitor. Roosting habitat is present directly east of the Project in the Wasatch Mountains. The Project area contains no roosting habitat.
Spotted bat *Euderma maculatum*	Forest Service Sensitive	Inhabit a variety of habitats that range from deserts to forested mountains. They hibernate and roost in caves and rock crevices, and are often associated with water sources (UDWR 2013d).	**Considered.** This species may occur within the Project as a foraging visitor. Roosting habitat is present directly east of the Project in the Wasatch Mountains. The Project area contains no roosting habitat.
Townsend's western big-eared bat *Corynorhinus townsendii townsendii*	Forest Service Sensitive Utah SPC	Inhabits a variety of habitats, but is often found near forested areas. Uses caves, buildings and mines for day roosting and winter hibernation. Occur statewide at elevations below 9,000 feet (UDWR 2013d).	**Considered.** This species may occur within the Project as a foraging visitor. Roosting habitat is present directly east of the Project in the Wasatch Mountains. The Project area contains no roosting habitat.
Western red bat *Lasiurus blossevillii*	Forest Service Sensitive Utah SPC	Occur near water, often in wooded areas, with tall trees to roost in during the day. Often found near riparian wetlands when feeding. This species is extremely rare in Utah. (UDWR 2013d).	**Considered**. This species may occur within the Project as a foraging visitor. Roosting habitat is present directly east of the Project in the Wasatch Mountains. The Project area contains no roosting habitat.
Reptiles and Amphibians			
Boreal Toad (*Bufo boreas*)	Forest Service Sensitive	Occurs along slow moving streams, wetlands, desert springs, ponds,	**Considered**: American Fork River runs through the Project. This

Species	Status	Habitat	Rational for Consideration
	Utah SPC	lakes, meadows, and woodlands (UDWR 2013d).	species could be encountered at the Project as a rare visitor dispersing out of American Fork Canyon. This species would be precluded from breeding in the Project area as this section of American Fork River does not support permanent water.
Columbia Spotted Frog (*Rana luteiventris*)	Forest Service Sensitive Utah CS	Occurs in isolated springs and seeps that have a permanent water source, and move overland in spring and summer after breeding. During cold winter months, spotted frogs burrow in the mud and become inactive (UDWR 2013d).	**Considered**: American Fork River runs through the Project. This species could be encountered at the Project as a rare visitor dispersing out of American Fork Canyon. This species would be precluded from breeding in the Project area as this section of American Fork River does not support permanent water.
Smooth Greensnake (*Opheodrys vernalis*)	Utah SPC	Occurs in riparian, scrub-shrub, and herbaceous environments, with open space and abundance of moist vegetation (UDWR 2013d).	**Considered**: American Fork River runs through the Project. This species could be encountered at the Project as a rare visitor dispersing out of American Fork Canyon.

Environmental Consequences: General Wildlife and Big Game Species

Direct and Indirect Effects: Proposed Action Alternative

Construction activities would begin in the summer of 2014 for duration of approximately 60 days. The Project area and immediate vicinity provides habitat for a variety of general wildlife species such as commonly occurring small mammals, birds, bats, and reptiles that are not considered special status species. It is expected that wildlife species occurring within the Project area are acclimated to the surrounding urban environment, and are likely acclimated to the presence of humans. A temporary loss of existing habitat along the Project ROW would occur due to the removal of vegetation. The Proposed Action would not cause a permanent change in existing vegetation communities, as the ROW is pre-existing and the immediate areas are generally disturbed. Over time, reclamation activities would return the ROW to a pre-existing condition. The loss of habitat would be a minor adverse impact, considered long-term because it would take several years for vegetation to reestablish.

Direct effects on general wildlife and big game species are possible from construction hazards (e.g., vehicles collisions and ground disturbing activities). Indirect effects on general wildlife that may inhabit or use the Project area and vicinity are possible due to construction noise and dust. It is likely that the human presence and construction noise would cause wildlife to avoid the immediate areas of disturbance, but are expected to return to the Project area upon completion of construction. BMPs are planned to control dust.

The Project area is surrounded by urban development and is not located within a critical big game area. Big game critical wintering, breeding, and birthing activities would not be directly affected by the Proposed Action.

The Proposed Action would have no long-term impact to wildlife within the small disturbance area, with any disturbance impacts lessened as reseeded vegetation becomes established. The proposed action would have no effect on big game species.

Direct and Indirect Effects: No Action Alternative

Pipeline replacement activities would not occur under the No Action Alternative. There would be no impacts to general wildlife or big game species.

Cumulative Effects

The alteration of habitat provided to general wildlife species by the ROW would lessen over time. The Project area is relatively small and habitat is available in the immediate vicinity. No impacts to big game are expected as a result of the Proposed Action. Cumulative impacts to general wildlife and big game species would not occur.

Environmental Consequences: Special Status Species and Migratory Birds

Impacts to Special Status Species considered in this analysis are detailed in the species specific sections below. Impacts to Special Status Species are documented by species taking into consideration the species' specific habitat requirements throughout their lifecycle.

Questar will follow mitigation measures specific to migratory birds to ensure ground-disturbing activities do not result in the "take" of an active nest or migratory bird protected under the MBTA. As a primary measure, vegetation clearing will take place outside the generally recognized avian breeding and nesting period (April 1 to July 15) and the ROW would be re-vegetated following completion of the pipeline replacement construction activities. Since the Proposed Action would conduct vegetation clearing outside this period, and the ROW would be re-vegetated no adverse impacts to migratory birds are anticipated. Additionally the Project area is surrounded by urban development. It is expected that avian species occurring in the area are acclimated to the presence of humans and human related activities.

SPECIAL STATUS BIRDS:

Bald Eagle (Haliaeetus leucocephalus)

Direct and Indirect Effects: Proposed Action Alternative

Bald eagles are not known to breed near the Project area. The species may occur in or near the Project area in winter and during migration. Bald eagles are known to use mature cottonwood trees along portions of Utah Lake and the Jordan River west of the Project area for winter roosting. Due to a lack of large cottonwoods or other mature trees, it is unlikely bald eagles would roost in the Project area. Bald eagles are expected to occur only as a migrating or foraging visitor. There would be no direct or indirect effects on bald eagles or their habitat as a result of the Proposed Action; therefore the Project would have no impact on bald eagles.

Direct and Indirect Effects: No Action Alternative

Construction activities would not occur under the No Action Alternative. There would be no impact on bald eagles.

Cumulative Effects

There would be no direct or indirect effects on bald eagles due to Project implementation; therefore, no cumulative effects would occur as a result of the Proposed Action.

Bobolink *(Dolichonyx oryzivorus)*

Direct and Indirect Effects: Proposed Action Alternative

Bobolinks are known to breed in the agricultural areas within Utah. Agricultural areas near Utah Lake are located approximately seven miles west of the Project area. The Project area contains upland shrub and grass species; however; there are no wet meadows, wet grasslands, or wet hayfields in or near the

Project area. Therefore, it is unlikely that bobolinks would breed in the Project area. It is expected that bobolinks could occur in the Project area as a migrating or foraging visitor. There would be no direct or indirect effects on bobolinks or their habitat as a result of the Proposed Action; therefore the Project would have no impact on bobolinks.

Direct and Indirect Effects: No Action Alternative

Under the No Action Alternative, there would be no construction activities that would take place in the Project area. Based on this, there would be no impact on bobolinks.

Cumulative Effects

There would be no direct or indirect effects on bobolink with implementation of the Proposed Action. No cumulative effects would occur.

Ferruginous hawk (*Buteo regalis)*

Direct and Indirect Effects: Proposed Action Alternative

Portions of the Wasatch Mountains and lower foothills along the western slope include shrub and grassland habitats and could provide potential nesting habitat for ferruginous hawks. The Project area contains upland shrub and grass species; however, there are no elevated sites (i.e. mounds, cliffs, or outcrops) in the Project capable of supporting nesting activities associated with this species. Additionally, no habitat for this species is present due to human disturbance in the area. It is expected that ferruginous hawks could occur in the Project area as a migrating or foraging visitor. There would be no direct or indirect effects on ferruginous hawks or their habitat as a result of the Proposed Action; therefore the Proposed Action would have no impact on ferruginous hawks.

Direct and Indirect Effects: No Action Alternative

Under the No Action Alternative, construction activities would not occur. There would be no impact on ferruginous hawks.

Cumulative Effects

There would be no direct or indirect impacts on ferruginous hawks with implementation of the Proposed Action. Cumulative effects would not occur.

Greater sage-grouse (*Centrocercus urophasianus*)

Direct and Indirect Effects: Proposed Action Alternative

The Greater sage-grouse is known to occur in areas of central Utah typified by the presence of dense sage brush to support forage and brood rearing and large open areas to support breeding activities. The Project area contains a vegetation community dominated by sagebrush; however, there are no large open areas or documented leks within >20 miles of the Project area. Furthermore the Project area is surrounded by urban development which would likely preclude this species from establishing in the immediate vicinity. It is not expected that the Greater sage-grouse would occur in the Project area, except as a rare or irregular migrant moving to more suitable habitat. There would be no direct or indirect effects on Greater sage-grouse or their habitat as a result of the Proposed Action; therefore the Proposed Action would have no impact on greater sage-grouse.

Direct and Indirect Effects: No Action Alternative

Under the No Action Alternative, construction activities would not occur. There would be no impact on Greater sage grouse.

Cumulative Effects

There would be no direct or indirect impacts on Greater sage-grouse with implementation of the Proposed Action. Cumulative effects would not occur

Peregrine Falcon (*Falco peregrinus anatum*)

Direct and Indirect Effects: Proposed Action Alternative

The cliffs along the western slope of the Wasatch Mountains provide potential nesting habitat for peregrine falcons. There are no recent records of this species breeding within one mile of the Project area. However, there is a known nesting area approximately 5 miles south in Slate Canyon (K. Hartman, Forest Service biologist, personal communication fall 2013). No cliffs occur within the Project area; however this species could occur in the Project area as a migrating or foraging visitor or dispersing from adjacent nesting habitats. There would be no direct or indirect effects on peregrine falcons or their habitat as a result of the Proposed Action; therefore the Proposed Action would have no impact on peregrine falcons.

Direct and Indirect Effects: No Action Alternative

Under the No Action Alternative, construction activities would not occur. There would be no impact on peregrine falcons.

Cumulative Effects

There would be no direct or indirect impacts on peregrine falcons with implementation of the Proposed Action. Cumulative effects would not occur.

Short-eared owl (*Asio Flammeus*)

Direct and Indirect Effects: Proposed Action Alternative

Short-eared owls are known to occur in arid landscapes of Utah in open grassland, shrublands, and other open habitats and breed near open habitats in wetland environments or near water. Wetland habitats near Utah Lake are located approximately seven miles west of the Project area may support breeding activities. The Project area contains no wetland habitats capable of supporting breeding; however arid upland shrub and grass habitat is present. It is expected that this species could occur in the Project area, but only as an irregular migrant or as foraging visitor. There would be no direct or indirect effects on short-eared owls or their habitat as a result of the Proposed Action; therefore the Proposed Action would have no impact on short-eared owls.

Direct and Indirect Effects: No Action Alternative

Under the No Action Alternative, there would be no construction activities that would take place in the Project area. Based on this, there would be no impact on short-eared owls.

Cumulative Effects

There would be no direct or indirect effects on short-eared owls with implementation of the Proposed Action. No cumulative effects would occur.

SPECIAL STATUS MAMMALS:

American beaver (*Castor canadensis*)

Direct and Indirect Effects: Proposed Action Alternative

The American beaver is documented in Utah along slow moving streams, ponds, lakes, and reservoirs. This species is expected to could occur along portions of American Fork River upstream of the Project area in the Wasatch Mountains and possibly downstream along the Utah Lake and associated irrigation canals. USFS presently manages populations of American beaver within the Uinta Planning Area; however no management directives or future planning initiatives have been identified within or near the Project. The closest beaver management areas occur over five miles east of the Project within the Wasatch Mountains in areas which have been identified as "to be surveyed for beaver that contain no suitable beaver habitat" (USDA Forest Service 2012). American Fork River is not a year round or perennial flowing water feature within the Project area and is not expected to support beaver in the location of the Project. Given that this species is typically encountered in or near water, it is not expected that this species would occur as a resident, but may occur as a rare migrant dispersing out of suitable habitat in the Wasatch Mountains. There would be no direct or indirect effects on the American beaver, their habitats, or long-term Forest Service American beaver management goals as a result of the Proposed Action; therefore the Proposed Action would have no impact on the American beaver.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no effect on American beaver.

Cumulative Effects

There would be no direct or indirect effects on American beaver with implementation of the Proposed Action. No cumulative effects would occur.

Fringed Myotis (*Myotis thysanodes*)

Direct and Indirect Effects: Proposed Action Alternative

Fringed myotis is expected to occur along the Wasatch Mountains roosting in suitable rock crevices, mines, and structures and foraging in the general vicinity including the western foothill of the Wasatch Mountains. There are no caves, rock crevices, or structures in the Project area capable of supporting roosting activities. It is expected that this species would use the Project area and the immediate vicinity for foraging activities and may fly thorough the Project area dispersing to adjacent habitat. Any bats using the Project area or immediate areas would likely be accustomed to an existing level of human activity and would remain unaffected by Project activities. Additionally, the fringed myotis forages at night, when construction activities would not occur. There would be no direct or indirect effects on the fringed myotis as a result of the Proposed Action; therefore the Proposed Action would have no impact on fringed myotis.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on fringed myotis.

Cumulative Effects

There would be no direct or indirect effects on fringed myotis with implementation of the Proposed Action. No cumulative effects would occur.

Spotted Bat (*Euderma maculatum*)

Direct and Indirect Effects: Proposed Action Alternative

Spotted bats may occur along the Wasatch Mountains roosting in suitable rock crevices, mines, and structures and foraging in the general vicinity including the western foothills of the Wasatch Mountains. There are no caves, rock crevices, or structures in the Project area capable of supporting roosting activities. It is expected that this species would use the Project area and the immediate vicinity for foraging activities and may fly thorough the Project area dispersing to adjacent habitat. Any bats using the Project area or immediate areas would likely be accustomed to an existing level of human activity and would remain unaffected by Project activities. Additionally, the fringed myotis forages at night, when construction activities would not occur. There would be no direct or indirect effects on the spotted bat as a result of the Proposed Action; therefore the Proposed Action would have no impact on spotted bats.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on spotted bats.

Cumulative Effects

There would be no direct or indirect effects on spotted bats from implementation of the Proposed Action. No cumulative effects would occur.

Townsend's Western Big-eared Bat (*Corynorhinus townsendii townsendii*)

Direct and Indirect Effects: Proposed Action Alternative

Townsend's western big-eared bat may occur along the Wasatch Mountains roosting in suitable rock crevices, mines, and structures and foraging in the general vicinity including the western foothills of the Wasatch Mountains. There are no caves, rock crevices, or structures in the Project area capable of supporting roosting activities. It is expected that this species would use the Project area and the immediate vicinity for foraging activities and may fly thorough the Project area dispersing to adjacent habitat. Any bats using the Project area or immediate areas would likely be accustomed to an existing level of human activity and would remain unaffected by Project activities. Additionally, the Townsend's western big-eared bat forages at night, when construction activities would not occur. There would be no direct or indirect effects on the Townsend's western big-eared bat as a result of the Proposed Action; therefore the Proposed Action would have no impact on Townsend's western big-eared bats.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on Townsend's western big-eared bats.

Cumulative Effects

There would be no direct or indirect effects on Townsend's western big-eared bats with implementation of the Proposed Action. No cumulative effects would occur.

Western Red Bat (*Lasiurus blossevillii*)

Direct and Indirect Effects: Proposed Action Alternative

Western red bat may occur along the Wasatch Mountains roosting in forested areas and foraging in and around wooded and xeric riparian areas. There are no forested areas or trees in the Project area capable of supporting roosting activities. It is expected that this species would use the Project area and the immediate vicinity for foraging activities and may fly thorough the Project area dispersing to adjacent habitat. Any bats using the Project area or immediate areas would likely be accustomed to an existing

level of human activity and would remain unaffected by Project activities. Additionally, the western red bat forages at night, when construction activities would not occur. There would be no direct or indirect effects on the western red bat as a result of the Proposed Action; therefore the Proposed Action would have no impact on western red bats.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on western red bats.

Cumulative Effects

There would be no direct or indirect effects on western red bats due to implementation of the Propose Action. No cumulative effects would occur.

SPECIAL STATUS REPTILES AND AMPHIBIANS:

Boreal Toad (*Bufo boreas*)

Direct and Indirect Effects: Proposed Action Alternative

Boreal toad occurs along slow moving streams, wetlands, desert springs, ponds, lakes, meadows, and woodlands and is expected to occur in the Wasatch Mountains and along the western foothills of the Wasatch Mountains. Disturbance associated with the Proposed Action includes construction activities within the American Fork River which could support this species. Results of the field survey document that American Fork River is not a year round or perennial flowing water feature, and that this portion of the American Fork River is highly modified both above and below the Project area. Given that this species is typically encountered in or near water, it is not expected that this species would occur breeding or as a resident to the Project area. This species could be encountered as an incidental visitor to the Project area during flood events dispersing out of upstream portions of American Fork River from American Fork Canyon. There would be no direct or indirect effects on the boreal toad as a result of the Proposed Action; therefore the Proposed Action would have no impacts on boreal toads.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on boreal toads.

Cumulative Effects

There would be no direct or indirect effects on boreal toads due to Project implementation; therefore, no cumulative effects would occur.

Columbia Spotted Frog (*Rana luteiventris*)

Direct and Indirect Effects: Proposed Action Alternative

Columbia spotted frog toad occurs along springs and seeps with a permanent water source for breeding along the Wasatch Mountains and may disperse overland in the spring after the breeding period. Disturbance associated with the Proposed Action includes construction activities within the American Fork River which could support this species. Results of the field survey document that American Fork River is not a year round or perennial flowing water feature, and that this portion of the American Fork River is highly modified both above and below the Project area. Given that this species is typically encountered in or near water, it is not expected that this species would occur breeding or as a resident to the Project area. This species could be encountered as an incidental visitor to the Project area during flood events dispersing out of upstream portions of American Fork River from American Fork Canyon. There would be

no direct or indirect effects on the Columbia spotted frog as a result of the Proposed Action; therefore the Proposed Action would have no impacts on Columbia spotted frogs.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on Columbia spotted frogs.

Cumulative Effects

There would be no direct or indirect effects on Columbia spotted frogs due to Project implementation; therefore, no cumulative effects would occur.

Smooth Greensnake (*Opheodrys vernalis*)

Direct and Indirect Effects: Proposed Action Alternative

The smooth greensnake occupies grassy areas along moist meadows. Habitat capable of supporting the smooth greensnake is documented along the western slope and foothills of the Wasatch Mountains. The Project area is located along the western foothills of the Wasatch Mountains and is dominated by upland sagebrush and rabbitbrush plant communities. No moist grassy habitat occurs in the Project area. It is not expected that this species would occur breeding or as a resident to the Project area, but could be encountered as a rare incidental visitor to the Project area dispersing to suitable habitats. There would be no direct or indirect effects on the smooth greensnake as a result of the Proposed Action; therefore the Proposed Action would have no impacts on smooth greensnake.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on smooth greensnakes.

Cumulative Effects

There would be no direct or indirect effects on smooth greensnakes due to Project implementation; therefore, no cumulative effects would occur.

MIGRATORY BIRDS:

Direct and Indirect Effects: Proposed Action Alternative

Migratory Birds protected under the MBTA are expected to occur as resident species breeding, nesting, and wintering within the Project Area or as foraging or migratory visitors, depending upon the species. Habitat capable of supporting breeding and nesting activities of ground and shrub nesting species occurs within the Project ROW. Some nesting habitat will be removed as a direct result of ground disturbing activities; however these species are expected to make use of similar nesting habitat directly adjacent to the Project. Additionally, the Project ROW will be re-vegetated and, over time, the Project ROW will return to existing conditions. Given that construction is timed to occur during the summer months, outside the generally recognized avian breeding and nesting period from April 1 to July 15, it is not expected that the Project would result in impacts to species protected under the MBTA. There would be no direct or indirect effects on migratory birds as a result of the Proposed Action; therefore the Proposed Action would have no impacts on migratory birds.

Direct and Indirect Effects: No Action Alternative

Construction and associated activities would not occur under No Action Alternative. There would be no impact on migratory birds.

Cumulative Effects

There would be no direct or indirect effects on migratory birds due to Project implementation; therefore, no cumulative effects would occur.

3.8 Archaeological, Cultural and Historic Resources

3.8.1 Scope of Analysis

Internal, interdisciplinary review and scoping identified the following issue addressed in this analysis:

Issue 1: How would the Proposed Action affect archaeological, cultural and historic resources?

Background: Surface disturbance activities associated with construction may affect archaeological, cultural and historic resources in and surrounding the Project area. Underground and overhead utility corridors have been developed in and around the Project and along the western slopes of the Wasatch Mountains. Historically the area supported a number of agricultural efforts and rural communities. Present day use of the vicinity includes urban residential dwelling, a municipal golf course, gravel mines, water management facilities, and various paved roads.

Indicators: A file search and Class III cultural resources inventory of the Project area was conducted in 2013 (Cardno ENTRIX 2013a). Prior to field work, archaeological site files and inventory reports were reviewed at the Utah State Historic Preservation Office (SHPO) records office. Where available, the UWCNF provided additional information and site forms for the vicinity. The parameters of the record search included the proposed replacement segment and a one-mile radius surrounding the segment.

In addition, the pipeline corridor was inventoried by one archaeologist walking the center line of the pipeline. Transects were spaced no more than 15 meters (50 feet) apart and were oriented to ensure sufficient coverage.

Analysis Area: Analysis of direct effects focuses on the area of disturbance associated with the proposed Project. Indirect and cumulative effects are addressed at the scale of one mile around the Project area.

3.8.2 Affected Environment and Environmental Consequences

Heritage resources are defined in the Forest Plan as “The remains of sites, structures, or objects used by people in the past – our cultural patrimony; this can be historical or pre-historic. Generally a synonym for cultural resources, although heritage resources may be more broadly inclusive.” Heritage resources include the knowledge of human activity on the UWCNF, and the physical remains from that activity. The pipeline replacement would include heavy equipment and would cause ground disturbance due to excavation and installation of a new segment of pipeline. A cultural resources inventory was required under Section 106 of the National Historic Preservation Act (NHPA), as amended (NHPA 2006).

Affected Environment: Archaeological, Cultural and Historic Resources

Seven known archaeological sites are located within one mile of the pipeline segment. One of these sites is located within the Project area; this site, a National Register of Historic Places (NRHP) eligible site, has a Smithsonian inventory number of 42UT1137/42UT1547. This is a trinomial system with 42 representing the State of Utah, the two letters (UT) representing Utah County, and the three digit number referencing the record of the site within the county. The majority of this site runs along the western slope of the Wasatch Mountains, along the western side of American Fork River, portions of the site extends into the current Project area.

Site 42UT1137/42UT1547 (American Fork Canyon Ditch/Mitchell Ditch) is part of a broader irrigation complex that dates to around 1889 and is still in use. This site has been previously considered eligible for inclusion in to the NRHP under Criterion A. The two site numbers may describe the same feature. The site form for Site 42UT1547 indicates that there is a discrepancy between the topographic map’s name

and that used by the water master for this entity. The correct name should be the American Fork Canyon Ditch. The ditch was first recorded in 2000 (E. Skinner), resurveyed in 2001 (T. Seacat), and again in 2007 (T. Johnson). This segment includes 300 feet of the ditch from Canyon Links Vista road to the east. To the southwest and outside of the inventory area, the ditch passes under Canyon Links Vista road via a large cement culvert. It is presumed covered at that point for an unknown distance, as no evidence of it is present on the other side of the road, which is in a newly developed suburb (Cardno ENTRIX 2013a).

Environmental Consequences: Archaeological, Cultural and Historic Resources

Direct and Indirect Effects: Proposed Action Alternative

Site 42UT1137/42UT1547 was previously recommended eligible for the NRHP under Criterion A. Project activities within this site include trenching, storage of materials, and the pipeline ROW. The existing Questar ROW presently occurs within this site, and the site cannot be avoided. Construction activities that would occur within this site will temporarily impact the site. The Proposed Action will not adversely affect any historic properties as long as the ditch is restored to its preconstruction state.

Direct and Indirect Effects: No Action Alternative

Construction activities associated with pipeline replacement would not occur under the No Action Alternative. There would be no effect on archaeological, cultural and historic resources.

Cumulative Effects

Since all adverse effects to archaeological, cultural, and historic resources would be entirely mitigated, there would be no cumulative effects.

3.9 Air Quality

In 1970, Congress created the Environmental Protection Agency (EPA) and passed the Clean Air Act to clean up air pollution in the U.S. Under the Clean Air Act, the EPA sets limits on certain air pollutants, including setting limits on how much can be in the air anywhere in the U.S. The Clean Air Act also gives the EPA the authority to limit emissions of air pollutants coming from sources. The requirements under the Clean Air Act are comprehensive and cover many different pollution sources (EPA 2013a).

The Clean Air Act identifies six common air pollutants that can injure health, harm the environment, or cause property damage. These pollutants include (EPA 2013a):

- Carbon monoxide (CO)
- Lead (Pb)
- Nitrogen dioxide (NO_2)
- PM10: particulate matter less than 10 microns in aerodynamic diameter; PM2.5: particulate matter less than 2.5 microns in aerodynamic diameter
- Ozone (O3)
- Sulfur oxides (SO_X)

The EPA has established National Ambient Air Quality Standards (NAAQS) for each of these pollutants. If the air quality in a geographic area meets the NAAQS, it is called an attainment area; areas that do not meet the NAAQS are called nonattainment areas and must develop comprehensive state plans to reduce pollutant concentrations to a safe level. The Clean Air Act requires that all areas of the country meet or strive to comply with the NAAQS (EPA 2013a).

The EPA and states, tribes, local governments, industry, and environmental groups have worked to establish a variety of programs to reduce air pollution levels. State and local air pollution agencies take the lead in carrying out the Clean Air Act, since they are able to develop solutions for pollution problems that require special understanding of local industries, geography, housing, travel patterns, and other factors in their state. These agencies monitor air quality, inspect facilities under their jurisdictions, and

enforce the Clean Air Act regulations. Each state develops State Implementation Plans (SIPs), which outline how each state will control air pollution under the Clean Air Act. The EPA approves the agency plans for reducing air pollution. The agencies use a permit system as part of their plan to make sure that pollution sources meet their goals to clean up the air (EPA 2013a).

The Utah Department of Environmental Quality (UDEQ) has promulgated several SIPs and their subsequent revisions to creating a dynamic framework for state air quality laws and regulations.

3.9.1 Scope of Analysis

The scope of analysis is based on internal, interdisciplinary review and scoping. The following issues were identified and are addressed in this analysis:

Issue 1: How would fugitive dust associated with construction affect air quality?

Background: Construction activities associated with the Proposed Action would generate fugitive dust.

Indicators: Particulate emissions

Analysis Area: Analysis of direct impacts includes Project area and the immediate vicinity of the Project area. Indirect and cumulative includes Utah County.

Issue 2: How would mobile source emissions associated with construction activities affect air quality?

Background: Vehicles and equipment associated with the Proposed Action would produce combustion emissions.

Indicators: Powered by either diesel or gasoline, vehicle and equipment operation is a source of NO_2, CO, volatile organic compounds (VOC), and small amounts of air toxins.

Analysis Area: Analysis of direct impacts includes Project area and vicinity of the Project area. Indirect and cumulative considers other past, present, and future Projects in the immediate vicinity of the Project in the context of effects to the air quality of Utah County.

3.9.2 Affected Environment and Environmental Consequences

Affected Environment: Air Quality

The Project area is located in Utah County, Utah. Utah County is designated as a nonattainment area for 2.5 micron particulate matter (EPA 2013b). Sources of PM2.5 emissions include combustion activities.

Environmental Consequences: Air Quality

Direct and Indirect Effects: Proposed Action Alternative

Air pollution associated with construction activities would be in the form of fugitive dust and combustion emissions from the operation of construction vehicles and equipment. All sources of air pollutions from the Proposed Action would be from mobile sources (non-stationary sources) and would be temporary. Particulate matter (i.e. fugitive dust) is the only air pollutant of the six identified by the EPA as a risk to human health, the environment, and property that may reach levels that warrant analysis. The equipment and vehicles that would generate fugitive dust would also generate combustion emissions. Vehicles and equipment generating the dust would include light utility vehicles (e.g. pickups, etc.), heavy-duty vehicles and construction equipment (e.g. trackhoes, backhoes, trenching machines, and cranes), and semi-trailers carrying pipe. Powered by either diesel or gasoline, they are sources of NO2, CO, VOC, and small amounts of air toxins.

Vehicles and equipment used in support of the Proposed Action would meet the vehicle emission limits of hydrocarbons, carbon monoxide, nitrogen oxides, and particulates (in the case of diesel vehicles). The

vehicle manufacturers are responsible for meeting regulations. In addition, all vehicles and equipment would have current registrations with the State of Utah. The release of combustion pollutants during construction is not expected to reach levels that warrant a detailed analysis.

Fugitive dust would be generated by construction activities. The existing unpaved access roads would be used to get equipment in and out of the site, primarily via pickup trucks and semi-trailers hauling pipe and equipment. Remaining machinery movement would occur on the pipeline ROW. Large construction equipment such as trenching machines and backhoes would travel very little on a given day and over the life of the Project. Trenching, backfilling, and clean-up activities would also generate dust. Dust emissions would be localized to the ROW and vicinity of the access roads.

The Questar construction manager or FL 24 Project compliance monitor would be responsible for ensuring that dust control measures and BMPs are implemented by contractors. The following dust control strategies are designed to meet 20 percent opacity or less on site and 10 percent opacity from fugitive dust at the site boundary.

- Throughout the construction process, erosion control measures would be implemented to retain the soil onsite. Sediment barriers (i.e. silt fences, straw bales, etc.) would be installed near sensitive and highly erosive areas.
- Areas that had vegetation prior to construction would be re-vegetated.
- Mulch and tackifier or erosion control blankets may be applied on unstable slopes or sensitive areas to stabilize the area.
- Effort would be made to complete final reclamation and cleanup of the disturbed areas within 10 days after backfilling. In general, disturbed areas would be re-vegetated as soon as practicable after final reclamation and cleanup.
- Fugitive dust from the access roads and the construction ROW would primarily be controlled using water. The water would be applied to the access roads and construction ROW using a rear spraying water truck or other comparable equipment. All visibly dry disturbed access roads and disturbed soil surface areas would be watered as necessary to control dust emissions. The frequency of the water application would largely depend on weather conditions and/or soil type. In the event of severely dry conditions, high wind, or citizen complaints, additional water would be applied. If high winds area expected during off-hours (after hours and non-working days), additional water would be applied prior to the temporary shutdown.
- Vehicles traveling on unpaved existing access roads would travel at posted speed limits. The vehicles traveling along or entering or exiting the construction area would travel at a speed which minimizes dust emissions.
- In general, long hauls of soil or other “dusty” material would not be conducted.
- Although not anticipated, any trucks hauling materials off site that have the potential to create dust would be adequately wetted-down or covered prior to leaving the Project site. Any material capable of generating dust which is deposited on public or private paved roads would be promptly removed.

The Project area of disturbance and dust generated by Project activities would be relatively small. Implementation of Questar’s dust control measures would provide the necessary BMPs to minimize generation of fugitive dust. The Proposed Action Alternative would have a short-term, minor adverse effect on air quality due to fugitive dust emissions generated during construction activities.

Direct and Indirect Effects: No Action Alternative

The No Action Alternative would have no effect on air quality since no construction activities would take place.

Cumulative Effects

The cumulative effects analysis considers activities in the immediate areas that may negatively contribute to air quality in Utah County. Of the past, present, and future foreseeable actions in the immediate vicinity, only traffic on State Route 92 and adjacent residential streets are contributors of emissions. The other actions identified are considered short-term contributors and would not occur during Questar's construction. As the contribution of fugitive dust from this Project would be considered short-term and minor, and other activities in the immediate vicinity are not currently contributing dust, there would be no cumulative effect from dust on air quality. Also, combustion emissions associated with the Proposed Action are not considered measurable; although the Project occurs in an area that contains several transportation corridors the Proposed Action would not contribute cumulatively to combustion emissions associated with vehicular traffic. Cumulative effects on air quality are not anticipated.

3.10 Public Health and Safety

3.10.1 Scope of Analysis

Internal interdisciplinary review and scoping identified the following issues addressed in this analysis:

Issue 1: How would the Proposed Action affect public health and safety?

Background: Construction activities would require access from Country Club Drive, and is not expected to negatively affect traffic, present safety concerns, or increase the potential of vehicles coming in contact with construction debris. Construction workers and equipment present in the Project area may increase risk of fires. Presence of pressurized natural gas in existing pipeline and use of new line to convey natural gas requires proper depressurization and testing.

Indicators: Questar, and their contractors, will have fire suppression equipment (fire extinguishers and water trucks). Standard deactivation and testing techniques would be implemented for all pressurized natural gas pipelines associated with the Proposed Action.

Analysis Area: Analysis of direct, indirect, and cumulative effects focuses on areas of proposed disturbance within the Project area and within the vicinity of the Project area (0.05 mile).

Issue 2: What types of waste would be produced with construction activities?

Background: Construction activities and decommissioning of the existing pipe would produce construction waste including possibly hazardous materials (i.e. asbestos).

Indicators: Types of waste generated; methods for handling and disposal.

Analysis Area: Analysis of impact focuses on areas of proposed pipe reconnection or removal within the Project area. Indirect and cumulative effects are addressed at the scale of the vicinity of Project area (0.05 mile).

3.10.2 Affected Environment and Environmental Consequences

Public health and safety is a priority for construction activities on and off UWCNF lands. The only Forest-wide Standards within the Forest Plan that relate specifically to public health and safety are in regards to fires, which state that human-caused fires (either accidental or arson) are unwanted and should be suppressed, and that human life (firefighter and public safety) should be the highest priority during a fire. Other potential health and safety concerns identified include, deactivation and testing of pipeline, and waste handling.

Affected Environment: Public Health and Safety - Fire

The UNF fire management desired condition is to allow fire to play its natural role where appropriate and desirable, but to actively suppress fire where necessary to protect life, investments, and valuable natural resources (USDA Forest Service 2003a).

Project is located in a Wildland Urban Interface Area (Radeloff et al. 2005). Construction actions will include welding and cutting, which may be Utah Division of Forestry, Fire, and State Lands permittable action, unless exempted (ICC 2006). City of Highland and Cedar Hills are identified as "at risk" on the 2013 Communities at Risk to Wildland Fire (UDFFS 2014).

Affected Environment: Public Health and Safety - Deactivation and Testing of Pipeline

The existing pipeline currently supplies natural gas to the western slope of the Wasatch Mountains in Utah County, UT. The pipeline would require depressurization prior to construction, achieved by isolating the replacement segment and releasing the trapped gas to the atmosphere. Once replaced, the new pipeline would require safety testing prior to use. Pressure testing would be conducted to ensure the new pipeline is ready to safely transport natural gas.

Environmental Consequences: Public Health and Safety – All Topics

Direct and Indirect Effects: Proposed Action Alternative

Fire

The Proposed Action may increase the risk of fire danger due to activities and items such as smoking, sparking, catalytic converters, vehicle fires, welding, normal operations, and refueling of equipment. Questar would implement standard fire prevention and control measures to minimize the risks of fire during construction. Fire prevention and control measures identifies requirements of Questar, the construction contractor, and construction crews that must be followed to prevent and suppress all fires in accordance with federal, state, and local regulations. The fire prevention and suppression measures would be in effect from the beginning to the end of construction and would be followed at all times. Standard fire prevention and control measures contain the following measures to prevent and suppress a fire in the event that one is accidentally started during construction:

- Standard Fire Prevention Measures:
    - Fire Guard
    - Smoking
    - Burning
    - Spark Arresters
    - Vehicle Parking, Operation, and Refueling
    - Welding
    - Fire Control Equipment
    - Restricted Operations

With the implementation of standard fire prevention and control measures, included as part of the Proposed Action Alternative, and obtaining the appropriate permits, the direct and indirect effects to public health and safety and the environment would be no effect.

Deactivation/Testing of Pipeline

Prior to construction, the section of the FL 24 pipeline that is proposed to be replaced would be isolated and depressurized. Local emergency response agencies would be contacted and made aware of this

activity. Upon completion of the pipeline replacement the new pipe section with be pressure tested using nitrogen so there will be no need for utilization of municipal water or discharge of hydrostatic tested water.

With implementation of these measures, the direct effects to public health and safety related to the deactivation and testing of the pipeline would be no effect.

Direct and Indirect Effects: No Action Alternative

The No Action Alternative would have no effect on public health and safety and the environment. Construction activities would not occur, therefore; there would be no effect on public health and safety and the environment.

Cumulative Effects

The Proposed Action would implement safety controls to prevent direct and indirect effects to public health and safety and the environment. There would be no cumulative effects on public health and safety and the environment when considered with other past, present, and reasonably foreseeable future actions.

Affected Environment: Hazardous and Solid Wastes

According to the Environmental Protection Agency, hazardous waste (e.g. liquids, solids, gases, or sludge) is waste that is dangerous or potentially harmful to our health or the environment. Solid waste is any garbage or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial commercial, mining, and agricultural operations, and from community activities. Before a material can be classified as a hazardous waste, it must first be a solid waste.

The existing pipeline may contain asbestos in the pipeline coating. The pipe removed is treated as if it could contain asbestos. It is wrapped so that asbestos is not released and then the pipe is properly disposed of. In addition, construction activities and workers associated with the Proposed Action would produce construction waste, human garbage, and human waste.

Environmental Consequences: Hazardous and Solid Wastes

Direct and Indirect Effects: Proposed Action Alternative

The existing pipeline may contain asbestos in the pipeline coating and sampling will be conducted prior to construction. During pipeline cutting, tie-in, or removal of portions of the existing pipeline, proper asbestos handling procedures would be followed. Only crews trained in the handling of asbestos would be allowed to perform work on the pipeline. The pipe joints identified as having asbestos coating would be wrapped in plastic and loaded onto trailers for hauling to a certified disposal site. All pipeline coating would be bagged and removed from the Project ROW. All permits and state ordinances required for the handling of this material would be strictly adhered to.

Other wastes such as general garbage and human wastes would also be generated during construction activities. Questar would implement construction BMPs for the proper handling of garbage and human waste, including the use of trash receptacle and portable restroom facilities for human and construction waste.

Waste handling practices incorporated in the Proposed Action Alternative would result in no direct or indirect effects to public health and safety and the environment.

Direct and Indirect Effects: No Action Alternative

The No Action Alternative would have no effect on public health and safety and the environment. Construction activities would not take place; therefore no wastes would be generated.

Cumulative Effects

Wastes would be properly handled, resulting in no direct or indirect effects to public health and safety and the environment. Therefore, there would be no cumulative effect on public health and safety and the environment from the generation of wastes associated with the Proposed Action.

4 Consultation and Coordination

4.1 Introduction

This chapter identifies the agencies and other entities consulted during the development of this EA. It also identifies the UWCNF and the contractor personnel involved in the preparation of the EA.

4.2 Public Scoping

This section will summarize the public involvement for this project. A list of agencies, organizations, and individuals contacted during scoping was provided by the PGRD. Comments received are listed in a table format by commenter and a response is noted to how that comment or concern was addressed in this analysis.

On June 25, 2013 the PGRD issued a public scoping notice that summarized the Proposed Action and invited comments regarding the scope of this EA. The notice was mailed to 108 agencies, organizations, and individuals on the Project mailing list. The notice was published in the Provo Daily Herald on June 27, 2013.

The 30-day scoping period closed on July 29, 2013. Two comments were received (U.S. Fish and Wildlife Service and Utah Environmental Congress) and copies of the commenter letters and responses can be found in Appendix A. Four inquires for additional information were addressed by the USFS in separate communications. The scoping notice is available at the PGRD Office in Pleasant Grove, Utah in the Project record.

Table 4-1: List of Commenters

Comments received					
Letter #	**Date Received**	**Name**	**Affiliation**	**City**	**State**
1	July 27, 2013	Larry Crist	USFWS	Salt Lake	UT
2	July 29, 2013	Kevin Mueller	Utah Environmental Congress	Salt Lake	UT

4.3 Federal, State, and Local Agencies

The following federal, state, and local agencies were consulted, notified, and/or coordinated with as part of this EA preparation:

- Uinta-Wasatch-Cache National Forest – Pleasant Grove Ranger District
- US Fish and Wildlife Service – Utah Ecological Field Office
- US Army Corps of Engineers
- State of Utah Division of Wildlife Resources
- State of Utah Department of Environmental Quality
- Utah Division of State History
- Utah Division of Water Rights
- Utah County
- Other agencies on PGRD NEPA scoping mailing list

4.3.1 Others

Other consultation completed in association with this EA process includes the following:

- Municipal water supplier
- Adjacent land owners

- Other interested parties on PGRD NEPA scoping mailing list

4.3.2 List of Preparers

Table 4-1 is a list of the UWCNF and the contractor personnel who were involved in the preparation of this EA.

Table 4-2: List of Preparers

Name	Position	Contribution
Forest Service Team		
Nelson Gonzalez-Sullow	NEPA Coordinator	NEPA Oversight, Project oversight, quality assurance/quality control review, Project management and interdisciplinary team coordination.
Jana Leinbach	Botanist	Review of vegetation analysis and vegetation management.
Karen Hartman	Wildlife Biologist	Review of wildlife analysis
Darcy Stock	GIS	GIS Support, data review
Charlie Condrat	Hydrologist	Review of water, air, and public health and safety analyses.
Stacey Weems	Soils Scientist	Review of soils and geology analysis
Dave Hatch	Landscape Architect	Review of scenic resources analysis.
Kellie Whitton	Fisheries Biologist	Review of wildlife analysis.
Tom Flanigan	Archaeologist	Review of archaeological, cultural and historic resources analyses.
Cardno ENTRIX Team		
Jim Burruss	Project Manager, Senior NEPA Specialist	NEPA Oversight, Resource Section Author and document preparation
Aaron James	NEPA Specialist, Project Scientist	Resource Section Author and document preparation
Ingrid Kimball	NEPA Technical Editor	Document preparation and review
Zach Nelson	Archaeologist/GIS	Cultural and historic resources analysis, data review, mapping.

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Cover Photograph: Photo of FL 24 Project area looking east from center of Project. Photo taken September 13, 2013. By A. James.

APPENDIX A

COMMENTER LETTERS AND RESPONSES

United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

July 27, 2013

In Reply Refer To:
FWS/R6
ES/UT
13-CPA-0041

U.S. Forest Service, Uinta-Wasatch-Cache National Forest
Pleasant Grove Ranger District
Attention: Jon Stansfield, District Ranger
390 North 100 East
Pleasant Grove, Utah 84062

RE: Questar Gas Company Feeder Line 24 Replacement Project (FL 24)

Dear Mr. Stansfield:

We received a scoping notice, dated June 24, 2013, requesting comment on your proposal to prepare an environmental assessment (EA) on the subject project. Questar Gas Company proposes to replace approximately 0.29 miles of existing 10-inch diameter steel pipe with 12-inch diameter steel pipe to meet increasing customer demands for natural gas and to increase pipeline depth below the American Fork River. Approximately 0.24 miles of the pipeline replacement would be on lands administered by the U.S. Forest Service and approximately 0.05 miles would be on private lands.

Pursuant to the National Environmental Policy Act (42 U.S.C. 4321-4347), the Migratory Bird Treaty Act (16 U.S.C. 703-712), the Endangered Species Act of 1973, as amended (16 U.S. C. 1531 *et seq.*), the Bald and Golden Eagle Protection Act (16 U.S. C. 668-668c), and the Fish and Wildlife Coordination Act (16 U.S.C. 661-666c), we are identifying issues that should be addressed relative to fish and wildlife resources for this project. In Section 1 of this letter we provide comment on the scope of your EA. In Section 2, we address your Endangered Species Act section 7 responsibilities.

Section 1

Migratory Birds, including Raptors

Your environmental analysis should specifically assess potential impacts to migratory birds and establish measures to avoid and minimize impacts to birds. The Migratory Bird Treaty Act (MBTA) prohibits the take of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, issued on January 11, 2001, affirmed the responsibilities of Federal agencies to

comply with the MBTA. To ensure ground disturbing activities do not result in the "take" of an active nest or migratory bird protected under the MBTA, we recommend:

a. Any ground-disturbing activities or vegetation treatments should be performed before migratory birds begin nesting or after all young have fledged to avoid incidental take;
b. If activities must be scheduled to start during the migratory bird breeding season, take appropriate steps to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures and use of various excluders (e.g., noise). Prior to nesting, birds can be harassed to prevent them from nesting on the site.
c. If activities must be scheduled during the migratory bird breeding season, a site-specific survey for nesting birds should be performed starting at least two weeks prior to groundbreaking activities or vegetation treatments. Established nests with eggs or young cannot be moved, and the birds cannot be harassed (see b., above), until all young have fledged and are capable of leaving the nest site;
d. If nesting birds are found during the survey, appropriate spatial buffers should be established around nests. Vegetation treatments or ground-disturbing activities within the buffer areas should be postponed until the birds have left the nest. Confirmation that all young have fledged should be made by a qualified biologist.

We recommend the use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck 2002) to provide consistent application of raptor protection measures and provide full compliance with environmental laws regarding raptor protection. Raptor surveys and mitigation measures are provided in the Guidelines to ensure that proposed projects will avoid adverse impacts to raptors. Locations of existing raptor nests should be identified prior to the initiation of project activities. Appropriate spatial buffer zones of inactivity should be established during crucial breeding and nesting periods relative to raptor nest sites or territories. Arrival at nesting sites can occur as early as December for certain raptor species. Nesting and fledging can continue through August.

Section 2

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necessary to conduct 3 years of surveys. We are able to assist you in developing an appropriate survey protocol.

Yellow-billed cuckoo (*Coccyzus americanus*) is a candidate species under the ESA and may also exist within the proposed project area. We recommend that you contact Kim Hersey at the Utah Division of Wildlife Resources (UDWR) to assist you in conducting a habitat assessment for this species within the proposed project area. You may reach her at (801) 319-6508. If suitable habitat exists, we recommend that you conduct surveys and coordinate measures with UDWR and our office to avoid and minimize impacts to the species and its habitat.

Formal consultation (50 CFR 402.14) is required if the Federal agency determines that an action is "likely to adversely affect" a listed species or will result in jeopardy or adverse modification of critical habitat (50 CFR 402.02). Federal agencies should also confer with the USFWS on any action which is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10). A written request for formal consultation or conference should be submitted to the USFWS with a completed biological assessment and any other relevant information (50 CFR 402.12).

Your attention is also directed to section 7(d) of the ESA, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their actions on any endangered or threatened species.

Only a Federal agency can enter into formal ESA section 7 consultation with the USFWS. A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare a biological assessment by giving written notice to the USFWS of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

We appreciate the opportunity to comment on the proposed pipeline project. We are available for further discussion about our recommendations. If we can be of further assistance, please contact Amy Defreese, Ecologist at (801) 975-3330 ext. 128, or email: amy_defreese@fws.gov.

Sincerely,

Larry Crist
Utah Field Supervisor

cc: UDWR – Springville (Attn: Kim Hersey) – by email

References

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U.S. Fish and Wildlife Service, 2011. U.S. Fish and Wildlife Service (USFWS) Utah Field Office Guidelines for Conducting and Reporting Botanical Inventories and Monitoring of Federally Listed, Proposed and Candidate Plants.

Comment Letter #1: USFWS

Response to Comment Letter #1

Summary: The USFWS included two specific recommendations that the environmental analysis 1) assess potential impacts to migratory birds and establish measures to avoid and minimize ground disturbance impacts to birds, and 2) review the proposed action to determine if it will affect any ESA listed species or critical habitat that may occur in the Project area, with a focus on Ute ladies'-tresses and Yellow-billed cuckoo.

Response: Proposed action is scheduled to commence after the generally recognized migratory bird nesting period (July15) to avoid disturbance. A biological survey was conducted in late summer 2013 to determine the presence of any existing raptor nests, Ute ladies'-tresses and Yellow-billed cuckoo or suitable habitat. No suitable habitat or species presence was observed and impacts were analyzed in previous sections.

From: Kevin Mueller [mailto:kevin@uec-utah.org]
Sent: Monday, July 29, 2013 9:41 PM
To: FS-comments-intermtn-uinta-pleasantgrove
Cc: Kevin Mueller; kevinmueller97@gmail.com
Subject: UEC comments on @uestar Gas Company's Feeder Line 24 Replacement Project

July 29, 2013
Jon Stansfield, District Ranger
390 North 100 East
Pleasant Grove, Utah 84062

Dear Jon,

The Utah Environmental Congress (UEC) appreciates this opportunity to provide comments in response to the Forest's legal notice of June 27 that describes the proposed action that is being called 'Questar Gas Company's Feeder Line 24 Replacement Project.' UEC is an interested party with concerns, questions, recommendations and objections relating to the proposed action as well as the environmental assessment that is said in the legal notice to be released at some time this or next year.

UEC does not support the proposed action. It's impacts are not justified nor are they desired. The portion of the project on National Forest lands should not proceed. Deny the request from the applicant.

The description of the proposed action provided does not adequately justify location of the expanded hydrocarbon pipeline corridor on National Forest lands. The pipeline needs to be relocated to non-National Forest land. No justification otherwise is provided. The proposed action on National Forest lands is not valid as it is not properly justified or supported.

We believe that a comment period on the environmental assessment needs to be provided before the start of the administrative review period. We request that such is made so. Please respond to this request either way. In the case at hand it is certainly, at the very least, practicable to provide such a public comment period. Without doing so there is no way for the public to evaluate the range or alternatives developed nor the quality of the supporting environmental analysis until it is too late; until a draft section 218 (defacto final) decision document is issued.

Is the expanded right of way and/or development activity in IRA, wetlands, or TES species' habitats? If yes we request that the corresponding portion of the action proposed be modified due to the irreversible and/or irretrievable commitments of nationally owned public lands, as well as on the ground assesses and sensitive rare natural resources.

Please mail all environmental documents for this project, and the supporting specialist and other reports prepared to UEC's office when each becomes available for review. We thank you very much for your time and effort in following up with our concerns.

Sincerely,

/s/
Kevin Mueller,
Program Director
Utah Environmental Congress
1817 S. Main St, Ste 10
Salt Lake City, Utah 84115

Response to Comment Letter #2

Comment letter 2

Summary: The Utah Environmental Congress (UEC) does not support the proposed action and requested the USFS to deny the request from the applicant. The UEC stated impacts are not justified nor are they desired. The portion of the pipeline replacement project on National Forest lands should be re-located to non-National Forest land. UEC asked if the expanded right of way and/or development activity is in IRA, wetlands, or TES species' habitats. Request was made to conduct on the ground biological assessments of sensitive rare natural resources. They also requested to be mailed all environmental documents for this project, and the supporting specialist and other reports prepared.

Response: The USFS will review the proposed action and impacts evaluated as part of this document as well as supporting cultural and biological resource reports submitted by Questar. A biological survey was conducted in late summer 2013 to determine the presence of any existing raptor nests, special status plant or animal species or suitable habitat. No suitable habitat or special status species presence was observed and impacts to natural resources were analyzed in previous sections. Requested environmental documents were made available to UEC.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

July 27, 2013

In Reply Refer To:
FWS/R6
ES/UT
13-CPA-0041

U.S. Forest Service, Uinta-Wasatch-Cache National Forest
Pleasant Grove Ranger District
Attention: Jon Stansfield, District Ranger
390 North 100 East
Pleasant Grove, Utah 84062

RE: Questar Gas Company Feeder Line 24 Replacement Project (FL 24)

Dear Mr. Stansfield:

We received a scoping notice, dated June 24, 2013, requesting comment on your proposal to prepare an environmental assessment (EA) on the subject project. Questar Gas Company proposes to replace approximately 0.29 miles of existing 10-inch diameter steel pipe with 12-inch diameter steel pipe to meet increasing customer demands for natural gas and to increase pipeline depth below the American Fork River. Approximately 0.24 miles of the pipeline replacement would be on lands administered by the U.S. Forest Service and approximately 0.05 miles would be on private lands.

Pursuant to the National Environmental Policy Act (42 U.S.C. 4321-4347), the Migratory Bird Treaty Act (16 U.S.C. 703-712), the Endangered Species Act of 1973, as amended (16 U.S. C. 1531 *et seq.*), the Bald and Golden Eagle Protection Act (16 U.S. C. 668-668c), and the Fish and Wildlife Coordination Act (16 U.S.C. 661-666c), we are identifying issues that should be addressed relative to fish and wildlife resources for this project. In Section 1 of this letter we provide comment on the scope of your EA. In Section 2, we address your Endangered Species Act section 7 responsibilities.

Section 1

Migratory Birds, including Raptors

Your environmental analysis should specifically assess potential impacts to migratory birds and establish measures to avoid and minimize impacts to birds. The Migratory Bird Treaty Act (MBTA) prohibits the take of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, issued on January 11, 2001, affirmed the responsibilities of Federal agencies to

comply with the MBTA. To ensure ground disturbing activities do not result in the "take" of an active nest or migratory bird protected under the MBTA, we recommend:

a. Any ground-disturbing activities or vegetation treatments should be performed before migratory birds begin nesting or after all young have fledged to avoid incidental take;
b. If activities must be scheduled to start during the migratory bird breeding season, take appropriate steps to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures and use of various excluders (e.g., noise). Prior to nesting, birds can be harassed to prevent them from nesting on the site.
c. If activities must be scheduled during the migratory bird breeding season, a site-specific survey for nesting birds should be performed starting at least two weeks prior to groundbreaking activities or vegetation treatments. Established nests with eggs or young cannot be moved, and the birds cannot be harassed (see b., above), until all young have fledged and are capable of leaving the nest site;
d. If nesting birds are found during the survey, appropriate spatial buffers should be established around nests. Vegetation treatments or ground-disturbing activities within the buffer areas should be postponed until the birds have left the nest. Confirmation that all young have fledged should be made by a qualified biologist.

We recommend the use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck 2002) to provide consistent application of raptor protection measures and provide full compliance with environmental laws regarding raptor protection. Raptor surveys and mitigation measures are provided in the Guidelines to ensure that proposed projects will avoid adverse impacts to raptors. Locations of existing raptor nests should be identified prior to the initiation of project activities. Appropriate spatial buffer zones of inactivity should be established during crucial breeding and nesting periods relative to raptor nest sites or territories. Arrival at nesting sites can occur as early as December for certain raptor species. Nesting and fledging can continue through August.

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APPENDIX B

QUESTAR FL 24 NOXIOUS AND INVASIVE WEED MANAGEMENT PLAN

Noxious and Invasive Weed Management Plan

Questar Gas Company
Feederline 24 Highland City Replacement Project on Uinta-Wasatch-Cache National Forest Administered Land

Utah County, Utah

April 2014

TABLE OF CONTENTS

1.0 INTRODUCTION

This Noxious and Invasive Weed Management Plan (Plan), has been specifically developed in support of Questar Gas Company's (Questar) Feederline 24 Highland City Replacement Project (FL 24 or Project), proposed for construction in 2014 on lands administered by the Uinta-Wasatch-Cache National Forest (UWCNF). It has been developed to address the existing infestations of noxious weeds found within the Right-of-Way, (ROW), and the potential spread of these and/or other noxious and invasive weeds, within the ROW. It also addresses prevention of new infestations of old and/or new invader weed species in connection with or due to the pipeline replacement construction activities.

The term "weed" includes all plants defined as noxious and invasive weeds by U.S. Forest Service (USFS) policy and plants designated as noxious weeds by the Secretary of Agriculture, by the responsible State official, or County. The term "noxious weed" is designated to further define the potential for a weed to result in extraordinary negative economic impacts. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host of serious insects or disease, and being native or new to or not common to the United States or parts thereof. Weeds interfere with beneficial uses of land or water, displace desirable or native plants, and may affect human and animal health. Most troublesome weeds are aggressively invasive; they are highly adaptive, have high reproductive abilities, and are persistent. Weeds typically invade where human activities or natural events such as fires have caused disturbances, often producing monocultures and preventing native plant species from establishing. Once a weed infestation is established if it is not controlled before seed is produced and released, an ongoing seed source is stored in the soil, (seedbank), that provides for long-term re-infestation of the area on a yearly basis, (some seeds once in the soil remain viable for up to 50 years).

This Plan incorporates a pro-active approach to weed management that includes rapid response and treatment of existing weed infestations and that aims to minimize the possibility of weed spread and/or new invasion. Rather than simply eliminating weed populations, the goal of the Plan is to achieve desired plant species communities post-construction. Weed management practices described in this Plan have been developed through coordination with the UWCNF.

This Plan is organized by management activities as they will occur pre-construction, during construction and in post-construction phases. Treatment of existing weed infestations will occur pre-construction. Preventive measures during construction will be implemented to reduce the potential for introducing new weed species and to keep existing weeds from spreading. Post-construction re-vegetation activities, control measures, and long-term monitoring will ensure the desired plant community outcomes are achieved. Environmental protection measures to prevent impacts to adjacent areas from chemical use and safe handling practices are also included.

1.1 **Project Description**

This Plan incorporates an approximately 0.29-mile pipeline segment (0.24 miles of which are on lands administered by the UWCNF and located within Highland City, Utah. Questar plans to replace the existing 10-inch diameter pipe within the existing ROW with a new 12-inch diameter natural gas pipeline. An environmental review process in accordance with the National Environmental Policy Act (NEPA) for construction activities on this segment is currently being conducted. The UWCNF botanist identified the need to develop a weed management plan that

would apply during construction and to pre- and post- construction activities across the entire 75-foot-wide project ROW. Weeds were also identified as an issue for analysis in the Project Environmental Assessment (EA).

1.2 **Purpose, Goals, and Objectives**

The purpose of this Plan is to prescribe methods to prevent, eradicate, or control the spread of invasive and noxious weeds throughout the ROW in order to achieve the goal of desirable post-construction vegetation communities. The Plan aims to prevent the spread of weeds associated with construction activities. Questar and its contractors are responsible for carrying out the methods described in this Plan, during, prior to and post project.

Effective strategies to prevent, eradicate, or control infestations must include active coordination among ROW land managers and land owners.

2.0 WEED MANAGEMENT MEASURES

The Plan incorporates preventative measures and actions at the pre-construction, construction, and post-construction phases of the project. Existing weed treatment will occur pre-construction. Monitoring and follow-up controls will start with construction and continue long-term, (for the life of the ROW). The goal for vegetative establishment within the ROW post project is a 70 percent desirable vegetative cover established in the ROW, which will be verified and documented by Questar and this documentation submitted to the USFS for final approval.

2.1 Pre-Construction

Planning control efforts prior to disturbance is key to successful weed management. Agency coordination and a weed inventory of the ROW have been incorporated in the pre-construction phase.

2.1.1 Agency Coordination and Inventory

A pedestrian weed survey of the 75-foot-wide ROW was conducted in 2013 and identified there were no noxious or invasive weeds in the ROW at that time. A UWCNF review of the ROW in spring of 2014 found that there are existing infestations of Dalmatian toadflax and other invasive weeds (Field bindweed and Houndstounge) that exist within the ROW and that will require treatment prior to beginning construction work.

2.2 Construction

Preventative actions to control the spread of weeds and the introduction of new species will be implemented throughout construction. Questar will implement and enforce Best Management Practices, (BMPs) to control weeds, including:

- Clean all equipment and vehicles of dirt and vegetative material prior to transport into the project area.
- Off-road equipment and vehicles will not be operated outside of the ROW, so that they will not track noxious weed seeds into the ROW from outside areas.
- Any required sediment retention structures will be composed of either a synthetic material or certified weed-free straw.

2.3 Post-Construction

The following practices to control weeds post-construction will be implemented and enforced by Questar or Questar contractors and verified as completed to the USFS:

- Re-establish vegetation in disturbed areas with a certified weed free seed mix that has been approved by the UWCNF, as soon as practicable following disturbance.
- Monitor revegetated areas by inspecting until there is 70 percent vegetative cover established in the ROW and provided documentation to the USFS. Long-term monitoring, (for life of ROW), will occur for noxious and invasive weeds, and treatment of infestations completed as necessary.

2.3.1 Control

General treatment practices available for use in eradicating, controlling, and/or containing noxious weeds include mechanical, biological, controlled grazing, and ground-based chemical spraying, or combinations of these treatments. Selection of the most appropriate treatment

depends on the environmental setting, land management agency objectives or conditions, the target species, and the risk of weed spread.

Chemical treatment is an effective method when the management objective is weed eradication or control. It involves the application of herbicides (chemical compounds) at certain stages of plant growth to kill weed species. Questar will obtain prior written authorization by submitting pesticide use proposals, (PUPs), to the USFS, Pleasant Grove Ranger District on a yearly basis as needed, and will use only herbicides approved/covered in the "Environmental Assessment (EA) for the control of Noxious Weeds and Other Undesirable Vegetation on the Uinta National Forest" when applying chemical treatments. Questar will use procedures for proper herbicide application, following all label directions/requirements. In addition, Questar will implement standard BMPs regarding herbicide application, handling of spills, and clean-up. The procedures to be followed are described below.

The ROW is a relatively narrow corridor, making identification of target areas and control applications highly manageable. Questar will employ hand-applied chemical control as it is considered the most effective option given project characteristics. The herbicide used will target noxious and invasive weeds and will be applied using backpack sprayers. No aerial applications would be made. Herbicides will not be applied in close vicinity, (minimum of 20 feet away when using backpack sprayers), to riparian areas, open water or on windy days. Follow-up treatments to be required long-term, (for life of ROW), to control weed encroachment and maintain the achieved desired species composition and density of 70 percent vegetative cover. Follow-up applications and monitoring will ensure success in the long-term. In addition to chemical control, weeds may be manually removed. Removal of small populations is effective if the entire taproot is removed prior to seed set. Plants should be bagged on site prior to transport and disposal.

2.3.2 Reclamation Methods

Trees, brush, other woody material, and rocks cleared from the ROW will be moved to one side of the ROW for later use in reclamation. These uses could include measures to impede unauthorized vehicle traffic, or re-contouring and reclamation efforts.

Topsoil removed during the clearing and grading operations will be segregated from subsoils. Topsoil and subsoils will be placed in separate piles on the non-working side of the ROW for subsequent restoration activities.

Of significant importance to long-term weed control is successful reclamation as soon as possible following site disturbance. Reseeding will be done at the appropriate time of year, considering weather conditions and construction timing, and would be based on site-specific factors such as slope, erosion potential, and size of the disturbed area. Questar will reseed the disturbed areas using a broadcast application method with a UWCNF approved and certified weed-free seed mix and rate. Questar will monitor the ROW post-construction to assess vegetation growth and establishment to achieve a 70 percent desirable vegetative cover. Long-term monitoring, (for life of ROW), will occur for noxious and invasive weeds, and treatment of infestations completed as necessary.

3.0 WEED CONTROL MEASURES

3.1 Herbicide Application and Handling

Herbicide application will be conducted according to manufacturer direction and guidance provided by the UWCNF, Pleasant Grove Ranger District and Utah County. Questar will obtain any required permits and will obtain prior written authorization by submitting, (PUPs), to the USFS, Pleasant Grove Ranger District on a yearly basis as needed, as well as provide notifications to landowners prior to applications. All herbicide applications would be performed by a State-certified applicator and would be in accordance with applicable laws and regulations. All herbicide applications would follow U.S. Environmental Protection Agency (EPA) label requirements and directions specified in Forest Service Handbooks 2109 and 6709.

Hand-application methods (e.g., backpack spraying) would be used due to the relative small project area and the anticipated small and scattered nature of weed populations. Calibration checks of equipment would be conducted at the beginning of spraying and periodically to ensure that proper application rates were achieved.

The following typical UWCNF accepted BMP measures applicable to ground-based applications of herbicides would be implemented with weed treatments:

Chemical Application Protective Measures

Chemical Application

- Pesticide Use Proposals (PUPs) will be completed on a yearly basis, or a longer timeframe if no weeds along the ROW are identified, by Questar, and a Pesticide Application Record (PAR) will be completed, as required. General treatment areas, methods, chemical amounts, and dates will be reported to the UWCNF, Pleasant Grove Ranger District.
- Herbicides approved/covered in the "Environmental Assessment (EA) for the control of Noxious Weeds and Other Undesirable Vegetation on the Uinta National Forest" (approved and registered by the Environmental Protection Agency) will be used according to label instructions; and will be applied by State-certified applicators or under their direct supervision.
- Calibrate equipment often enough to ensure application of the proper amount of herbicide.
- Notify adjacent landowners prior to treating weeds on UWCNF lands.
- Use dyes as necessary to ensure uniform coverage. Spray detection cards may be required in buffer zones near sensitive resources (streams, campgrounds) to monitor drift. Applicators using backpack sprayers must remain a minimum of 20 feet away from streams when applying herbicides.
- Apply all chemicals in accordance with EPA registration label requirements and restrictions, and applicable laws and policies. Follow FS Handbook 6709 and 2109, and FS Manual 2150 guidelines.
- Questar and/or Chemical contractors will have an Herbicide Emergency Spill Plan that includes methods to report and clean up spills. Applicators will be required to be familiar with the plan and carry spill-containment and clean-up equipment.
- Specific label directions, recommendations, and guidelines will be followed to reduce drift potential (such as nozzle size and pressure, additives, and wind speed).
- No chemical would be applied directly to sensitive plant species during spot treatments, and a 100-foot buffer would be maintained around known sensitive plant populations during broadcast treatments.

- No spraying of any herbicide will occur when wind velocity exceeds 10 mph, as per State Department of Agriculture standards. Spraying operations will not occur if precipitation is expected within 24 hours following the proposed application.
- Individuals who exhibit idiosyncratic responses, such as hypersensitivity to natural and synthetic compounds, will not be permitted to work on herbicide spray crews.

Procedures for Mixing, Loading, and Disposal of Herbicides

- All mixing of herbicides will occur at least 100 feet from surface waters or well heads.
- Applicators will mix only those quantities of herbicides that can be reasonably used in a day.
- Mixers will wear goggles or a face shield, rubber gloves, rubber boots, and protective overalls.
- All empty containers will be removed from the Project area and disposed of properly by the chemical contractor.
- Unused herbicides will be removed from the Project area.
- Any additional herbicide label requirements will be strictly followed during the mixing, loading, and disposal of herbicides.

Buffer Zones

- No chemical herbicides will be used within a 100-foot radius of any potable water spring development.
- No spraying of any herbicide will occur within 50 feet of open water or when wind velocity exceeds five mph. (Applicators using backpack sprayers must remain a minimum of 20 feet away from streams when applying herbicides.)

3.2 Herbicide Spills and Cleanup

Herbicide spills would be avoided through cautious handling and use of appropriately trained individuals. In the event of a spill, cleanup would be immediate. Contractors would keep spill kits in their vehicles to allow for quick and effective response to spills. Items to be included in the spill kit are as follows:

- Protective clothing and gloves
- Adsorptive clay, “kitty litter,” or other commercial adsorbent
- Plastic bags and bucket
- Shovel
- Fiber brush and screw-in handle
- Dust pan
- Caution tape
- Detergent

Response to an herbicide spill varies with the size and location of the spill. Given the application methods to be used and the relatively small Project area, general spill response procedures would include:

- Dressing the cleanup team in protective clothing
- Stopping the leaks
- Containing the spilled material
- Cleaning up and removing the spilled herbicide and contaminated adsorptive material and soil
- Transporting the spilled herbicide and contaminated material to an authorized disposal site for disposal

3.3 Worker Safety and Spill Reporting

Herbicide contractors would obtain and have readily available copies of the appropriate material safety data sheets for the herbicides used. All herbicide spills would be reported in accordance with applicable laws and requirements.

4.0 REFERENCES

United States Federal Register. February 8, 1999. Vol. 64. No. 25. Executive Order 13112: Invasive Species. President William Clinton.

U.S. Department of Agriculture-Forest Service (USDA-FS). 2003. Revised Forest Plan Wasatch-Cache National Forest. February.

USDA-FS. 2005. Wasatch-Cache National Forest Integrated Weed Management Strategy (Weed Strategy). Revised 2005.

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The references above were used in preparing this document, however, please note the following information also provide by UWCNF:

***For the South Zone of the UWCNF, Noxious and Invasive Weeds are not covered under the 2006 Wasatch-Cache National Forest Noxious Weed Treatment Program Final Environmental Impact Statement (Treatment Program FEIS) and Record of Decision. September.

Treatment is covered under the following document:

"Environmental Assessment (EA) for the control of Noxious Weeds and Other Undesirable Vegetation on the Uinta National Forest"

***And the Forest Plan for the South Zone of the UWCNF is:

U.S. Department of Agriculture-Forest Service (USDA-FS). 2003. Revised Forest Plan Uinta National Forest. May.

Noxious and Invasive Weed Management Plan

Questar Gas Company
Feederline 24 Highland City Replacement Project on Uinta-Wasatch-Cache National Forest Administered Land

Utah County, Utah

April 2014

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1.0 INTRODUCTION

This Noxious and Invasive Weed Management Plan (Plan), has been specifically developed in support of Questar Gas Company's (Questar) Feederline 24 Highland City Replacement Project (FL 24 or Project), proposed for construction in 2014 on lands administered by the Uinta-Wasatch-Cache National Forest (UWCNF). It has been developed to address the existing infestations of noxious weeds found within the Right-of-Way, (ROW), and the potential spread of these and/or other noxious and invasive weeds, within the ROW. It also addresses prevention of new infestations of old and/or new invader weed species in connection with or due to the pipeline replacement construction activities.

The term "weed" includes all plants defined as noxious and invasive weeds by U.S. Forest Service (USFS) policy and plants designated as noxious weeds by the Secretary of Agriculture, by the responsible State official, or County. The term "noxious weed" is designated to further define the potential for a weed to result in extraordinary negative economic impacts. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host of serious insects or disease, and being native or new to or not common to the United States or parts thereof. Weeds interfere with beneficial uses of land or water, displace desirable or native plants, and may affect human and animal health. Most troublesome weeds are aggressively invasive; they are highly adaptive, have high reproductive abilities, and are persistent. Weeds typically invade where human activities or natural events such as fires have caused disturbances, often producing monocultures and preventing native plant species from establishing. Once a weed infestation is established if it is not controlled before seed is produced and released, an ongoing seed source is stored in the soil, (seedbank), that provides for long-term re-infestation of the area on a yearly basis, (some seeds once in the soil remain viable for up to 50 years).

This Plan incorporates a pro-active approach to weed management that includes rapid response and treatment of existing weed infestations and that aims to minimize the possibility of weed spread and/or new invasion. Rather than simply eliminating weed populations, the goal of the Plan is to achieve desired plant species communities post-construction. Weed management practices described in this Plan have been developed through coordination with the UWCNF.

This Plan is organized by management activities as they will occur pre-construction, during construction and in post-construction phases. Treatment of existing weed infestations will occur pre-construction. Preventive measures during construction will be implemented to reduce the potential for introducing new weed species and to keep existing weeds from spreading. Post-construction re-vegetation activities, control measures, and long-term monitoring will ensure the desired plant community outcomes are achieved. Environmental protection measures to prevent impacts to adjacent areas from chemical use and safe handling practices are also included.

1.1 **Project Description**

This Plan incorporates an approximately 0.29-mile pipeline segment (0.24 miles of which are on lands administered by the UWCNF and located within Highland City, Utah. Questar plans to replace the existing 10-inch diameter pipe within the existing ROW with a new 12-inch diameter natural gas pipeline. An environmental review process in accordance with the National Environmental Policy Act (NEPA) for construction activities on this segment is currently being conducted. The UWCNF botanist identified the need to develop a weed management plan that

would apply during construction and to pre- and post- construction activities across the entire 75-foot-wide project ROW. Weeds were also identified as an issue for analysis in the Project Environmental Assessment (EA).

1.2 **Purpose, Goals, and Objectives**

The purpose of this Plan is to prescribe methods to prevent, eradicate, or control the spread of invasive and noxious weeds throughout the ROW in order to achieve the goal of desirable post-construction vegetation communities. The Plan aims to prevent the spread of weeds associated with construction activities. Questar and its contractors are responsible for carrying out the methods described in this Plan, during, prior to and post project.

Effective strategies to prevent, eradicate, or control infestations must include active coordination among ROW land managers and land owners.

2.0 WEED MANAGEMENT MEASURES

The Plan incorporates preventative measures and actions at the pre-construction, construction, and post-construction phases of the project. Existing weed treatment will occur pre-construction. Monitoring and follow-up controls will start with construction and continue long-term, (for the life of the ROW). The goal for vegetative establishment within the ROW post project is a 70 percent desirable vegetative cover established in the ROW, which will be verified and documented by Questar and this documentation submitted to the USFS for final approval.

2.1 Pre-Construction

Planning control efforts prior to disturbance is key to successful weed management. Agency coordination and a weed inventory of the ROW have been incorporated in the pre-construction phase.

2.1.1 Agency Coordination and Inventory

A pedestrian weed survey of the 75-foot-wide ROW was conducted in 2013 and identified there were no noxious or invasive weeds in the ROW at that time. A UWCNF review of the ROW in spring of 2014 found that there are existing infestations of Dalmatian toadflax and other invasive weeds (Field bindweed and Houndstounge) that exist within the ROW and that will require treatment prior to beginning construction work.

2.2 Construction

Preventative actions to control the spread of weeds and the introduction of new species will be implemented throughout construction. Questar will implement and enforce Best Management Practices, (BMPs) to control weeds, including:

- Clean all equipment and vehicles of dirt and vegetative material prior to transport into the project area.
- Off-road equipment and vehicles will not be operated outside of the ROW, so that they will not track noxious weed seeds into the ROW from outside areas.
- Any required sediment retention structures will be composed of either a synthetic material or certified weed-free straw.

2.3 Post-Construction

The following practices to control weeds post-construction will be implemented and enforced by Questar or Questar contractors and verified as completed to the USFS:

- Re-establish vegetation in disturbed areas with a certified weed free seed mix that has been approved by the UWCNF, as soon as practicable following disturbance.
- Monitor revegetated areas by inspecting until there is 70 percent vegetative cover established in the ROW and provided documentation to the USFS. Long-term monitoring, (for life of ROW), will occur for noxious and invasive weeds, and treatment of infestations completed as necessary.

2.3.1 Control

General treatment practices available for use in eradicating, controlling, and/or containing noxious weeds include mechanical, biological, controlled grazing, and ground-based chemical spraying, or combinations of these treatments. Selection of the most appropriate treatment

depends on the environmental setting, land management agency objectives or conditions, the target species, and the risk of weed spread.

Chemical treatment is an effective method when the management objective is weed eradication or control. It involves the application of herbicides (chemical compounds) at certain stages of plant growth to kill weed species. Questar will obtain prior written authorization by submitting pesticide use proposals, (PUPs), to the USFS, Pleasant Grove Ranger District on a yearly basis as needed, and will use only herbicides approved/covered in the "Environmental Assessment (EA) for the control of Noxious Weeds and Other Undesirable Vegetation on the Uinta National Forest" when applying chemical treatments. Questar will use procedures for proper herbicide application, following all label directions/requirements. In addition, Questar will implement standard BMPs regarding herbicide application, handling of spills, and clean-up. The procedures to be followed are described below.

The ROW is a relatively narrow corridor, making identification of target areas and control applications highly manageable. Questar will employ hand-applied chemical control as it is considered the most effective option given project characteristics. The herbicide used will target noxious and invasive weeds and will be applied using backpack sprayers. No aerial applications would be made. Herbicides will not be applied in close vicinity, (minimum of 20 feet away when using backpack sprayers), to riparian areas, open water or on windy days. Follow-up treatments to be required long-term, (for life of ROW), to control weed encroachment and maintain the achieved desired species composition and density of 70 percent vegetative cover. Follow-up applications and monitoring will ensure success in the long-term. In addition to chemical control, weeds may be manually removed. Removal of small populations is effective if the entire taproot is removed prior to seed set. Plants should be bagged on site prior to transport and disposal.

2.3.2 Reclamation Methods

Trees, brush, other woody material, and rocks cleared from the ROW will be moved to one side of the ROW for later use in reclamation. These uses could include measures to impede unauthorized vehicle traffic, or re-contouring and reclamation efforts.

Topsoil removed during the clearing and grading operations will be segregated from subsoils. Topsoil and subsoils will be placed in separate piles on the non-working side of the ROW for subsequent restoration activities.

Of significant importance to long-term weed control is successful reclamation as soon as possible following site disturbance. Reseeding will be done at the appropriate time of year, considering weather conditions and construction timing, and would be based on site-specific factors such as slope, erosion potential, and size of the disturbed area. Questar will reseed the disturbed areas using a broadcast application method with a UWCNF approved and certified weed-free seed mix and rate. Questar will monitor the ROW post-construction to assess vegetation growth and establishment to achieve a 70 percent desirable vegetative cover. Long-term monitoring, (for life of ROW), will occur for noxious and invasive weeds, and treatment of infestations completed as necessary.

3.0 WEED CONTROL MEASURES

3.1 Herbicide Application and Handling

Herbicide application will be conducted according to manufacturer direction and guidance provided by the UWCNF, Pleasant Grove Ranger District and Utah County. Questar will obtain any required permits and will obtain prior written authorization by submitting, (PUPs), to the USFS, Pleasant Grove Ranger District on a yearly basis as needed, as well as provide notifications to landowners prior to applications. All herbicide applications would be performed by a State-certified applicator and would be in accordance with applicable laws and regulations. All herbicide applications would follow U.S. Environmental Protection Agency (EPA) label requirements and directions specified in Forest Service Handbooks 2109 and 6709.

Hand-application methods (e.g., backpack spraying) would be used due to the relative small project area and the anticipated small and scattered nature of weed populations. Calibration checks of equipment would be conducted at the beginning of spraying and periodically to ensure that proper application rates were achieved.

The following typical UWCNF accepted BMP measures applicable to ground-based applications of herbicides would be implemented with weed treatments:

Chemical Application Protective Measures

Chemical Application

- Pesticide Use Proposals (PUPs) will be completed on a yearly basis, or a longer timeframe if no weeds along the ROW are identified, by Questar, and a Pesticide Application Record (PAR) will be completed, as required. General treatment areas, methods, chemical amounts, and dates will be reported to the UWCNF, Pleasant Grove Ranger District.
- Herbicides approved/covered in the "Environmental Assessment (EA) for the control of Noxious Weeds and Other Undesirable Vegetation on the Uinta National Forest" (approved and registered by the Environmental Protection Agency) will be used according to label instructions; and will be applied by State-certified applicators or under their direct supervision.
- Calibrate equipment often enough to ensure application of the proper amount of herbicide.
- Notify adjacent landowners prior to treating weeds on UWCNF lands.
- Use dyes as necessary to ensure uniform coverage. Spray detection cards may be required in buffer zones near sensitive resources (streams, campgrounds) to monitor drift. Applicators using backpack sprayers must remain a minimum of 20 feet away from streams when applying herbicides.
- Apply all chemicals in accordance with EPA registration label requirements and restrictions, and applicable laws and policies. Follow FS Handbook 6709 and 2109, and FS Manual 2150 guidelines.
- Questar and/or Chemical contractors will have an Herbicide Emergency Spill Plan that includes methods to report and clean up spills. Applicators will be required to be familiar with the plan and carry spill-containment and clean-up equipment.
- Specific label directions, recommendations, and guidelines will be followed to reduce drift potential (such as nozzle size and pressure, additives, and wind speed).
- No chemical would be applied directly to sensitive plant species during spot treatments, and a 100-foot buffer would be maintained around known sensitive plant populations during broadcast treatments.

- No spraying of any herbicide will occur when wind velocity exceeds 10 mph, as per State Department of Agriculture standards. Spraying operations will not occur if precipitation is expected within 24 hours following the proposed application.
- Individuals who exhibit idiosyncratic responses, such as hypersensitivity to natural and synthetic compounds, will not be permitted to work on herbicide spray crews.

Procedures for Mixing, Loading, and Disposal of Herbicides

- All mixing of herbicides will occur at least 100 feet from surface waters or well heads.
- Applicators will mix only those quantities of herbicides that can be reasonably used in a day.
- Mixers will wear goggles or a face shield, rubber gloves, rubber boots, and protective overalls.
- All empty containers will be removed from the Project area and disposed of properly by the chemical contractor.
- Unused herbicides will be removed from the Project area.
- Any additional herbicide label requirements will be strictly followed during the mixing, loading, and disposal of herbicides.

Buffer Zones

- No chemical herbicides will be used within a 100-foot radius of any potable water spring development.
- No spraying of any herbicide will occur within 50 feet of open water or when wind velocity exceeds five mph. (Applicators using backpack sprayers must remain a minimum of 20 feet away from streams when applying herbicides.)

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- Dressing the cleanup team in protective clothing
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Herbicide contractors would obtain and have readily available copies of the appropriate material safety data sheets for the herbicides used. All herbicide spills would be reported in accordance with applicable laws and requirements.

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APPENDIX C

PROTECTED BIOLOGICAL RESOURCES SURVEY REPORT

PROTECTED BIOLOGICAL RESOURCES SURVEY FOR THE QUESTAR FEEDER LINE 24 REPLACEMENT PROJECT, UTAH COUNTY, UTAH

Prepared for

Questar Gas Company
Salt Lake City, Utah

by

Aaron M. James

Cardno ENTRIX
Salt Lake City, Utah

November 2013

PROTECTED BIOLOGICAL RESOURCES SURVEY FOR THE QUESTAR FEEDER LINE 24 REPLACEMENT PROJECT, UTAH COUNTY, UTAH

Prepared for
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by
Aaron M. James

Submitted by
Cardno ENTRIX
807 E. South Temple Suite 350
Salt Lake City, Utah

November 2013

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APPENDICES

1.0 INTRODUCTION

Questar Gas Company (Questar) is proposing to replace a section of its Feeder Line (FL) 24 natural gas pipeline near American Fork, Utah (Project). Approximately 0.30 mile of existing, 10-inch diameter steel pipe will be replaced with 12-inch diameter steel pipe in order to meet increasing customer demands for natural gas. Once the replacement section is installed, the 0.30-mile section of existing 10-inch diameter pipe will be left in place to minimize additional ground disturbance. The existing pipeline occupies a 16-foot-wide permanent Right of Way (ROW). Questar requests an additional 34 feet in this replacement section for a total permanent ROW of 50 feet. An additional temporary 25-foot ROW will be required for construction for a total construction width of 75 feet resulting in temporary disturbance to approximately 2.72 acres. The 12-inch diameter replacement pipe will be buried adjacent to the existing pipeline within the new ROW. Given that this Project will result in ground disturbance, Questar has retained the services of Cardno ENTRIX to complete an evaluation of protected biological resources that occur or are likely to occur within and around the Project.

Cardno ENTRIX conducted a data review and pedestrian field survey to identify and document protected biological resources that occur, or have the potential to occur, within and near the Project. These protected biological resources include: species listed as threatened, endangered, candidate, or proposed (TECP) by the United States Fish and Wildlife Service (USFWS); United States Forest Service (USFS) Sensitive species and Management Indicator Species; and habitat capable of supporting USFWS or USFS listed species. For purposes of this report USFWS and USFS listed species will be collectively referred to as Special Status Species. This report documents the findings of the data review and field survey conducted between June 26 and September 13, 2013 by Cardno ENTRIX.

1.1 SURVEY AREA LOCATION

The Project is located in northeastern Utah County, Utah approximately 3.8 miles northeast of American Fork, Utah. The Survey Area consists of the Project and a 300-foot buffer around the Project (approximately 29.5 acres). An overview map showing the Survey Area is included on the Lehi, Utah and Timpanogos Cave, Utah U.S. Geological Survey (USGS) 7.5' series quadrangle maps (Figure 1). The Survey Area is located in Township 4 South, Range 2 East, portions of Section 31.

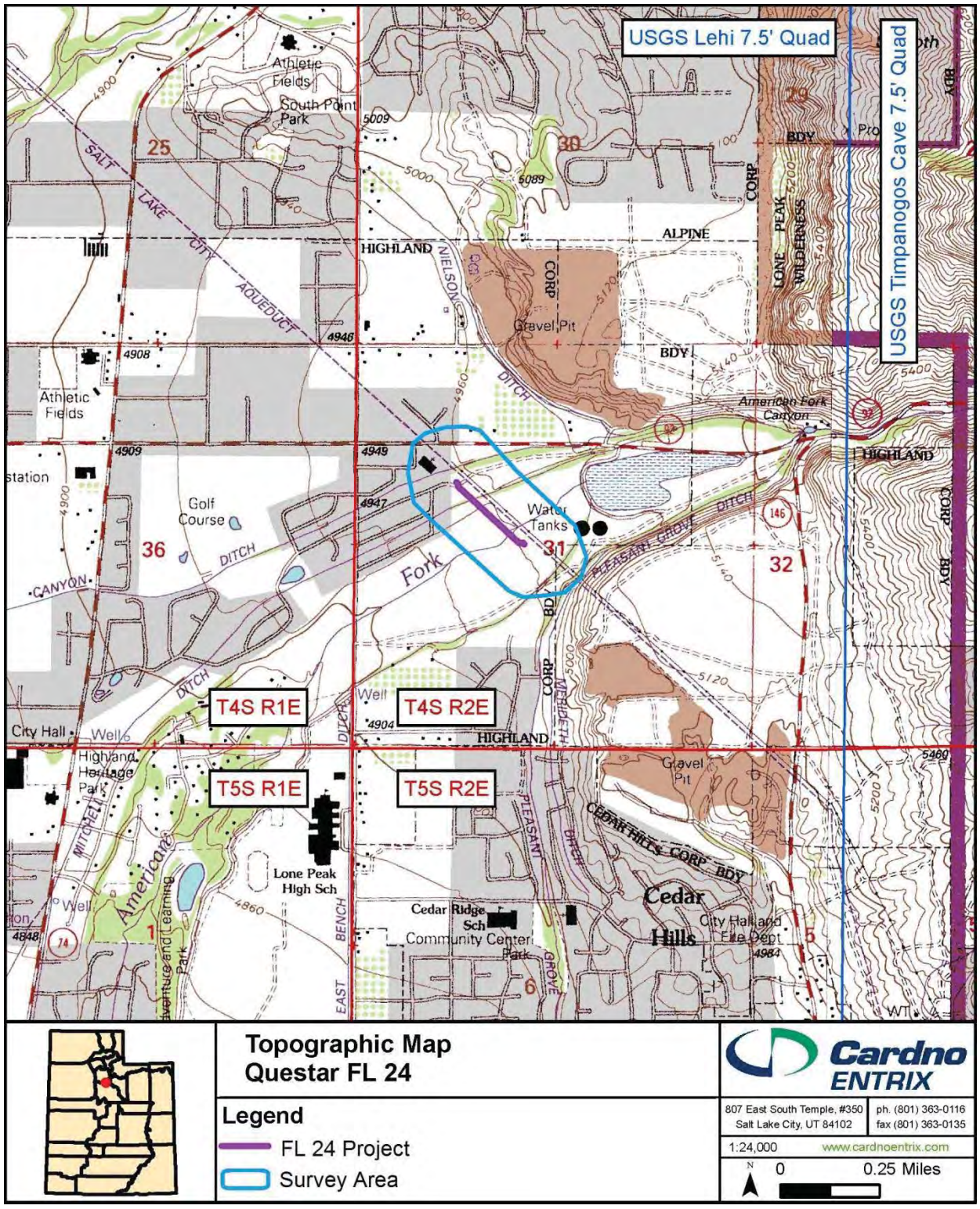

Figure 1. Topographic Map Showing Location of Survey Area. Base map taken from U.S.G.S. Lehi, Utah and Timpanogos Cave, Utah 7.5' Quadrangles.

2.0 METHODS

A data review was completed prior to conducting fieldwork to gather existing information and assist in the evaluation of the potential occurrence of protected biological resources within the Survey Area. The data review entailed an evaluation of online resources, agency publications, and agency correspondence on the potential of occurrence of Special Status Species near the Survey Area. The data reviewed included:

- USFWS Federally Listed and Proposed Endangered, Threatened, and Candidate Species and Critical Habitat in Utah for Utah County, Utah (Updated April 2, 2013);
- USFS Intermountain Region 4 Threatened, Endangered, Proposed, and Sensitive Species List (Updated July 27, 2011);
- USFS State of the Forest Report for Uinta National Forest, Uinta Planning Area, List of Management Indicator Species (Updated September 2011)
- Completion of a Special Status Species data request through the Utah Natural Heritage Program on October 15, 2013;
- Consultation with USFS, Karen Hartman, regarding the presence of Special Status Species within the Survey Area September 2013.
- Completion of a vegetation data review using Southwest Regional Gap Analysis Project (SWReGAP) data;
- Review of the USFWS National Wetlands Inventory (NWI) data layers (Updated May 20, 2010) for the occurrence of known or suspected USACE jurisdictional wetlands and WOUS.
- Review of aerial photography.

A field survey of the Survey Area was completed by Cardno ENTRIX Biologists Aaron James on September 13, 2013. The field survey included pedestrian transects within the Survey Area to document wildlife and plant communities within the Survey Area, identify the presence of Special Status Species, and identify habitat capable of supporting Special Status Species. All occurrences of protected biological resources, when encountered, were recorded with a Trimble GeoXM GPS and photographed.

Special Status Species surveys were completed using Visual Encounter Surveys across the Survey Area. Surveys for Special Status Species were conducted following timing and survey guidelines as outlined in the approved agency protocols where applicable. Specifically survey methodology and habitat determinations followed the USFWS recommended Ute ladies'-tresses Field Survey Guidelines U.S. Fish and Wildlife Service-Utah Ecological Services Field Office March 12, 2007.

3.0 RESULTS AND CONCLUSIONS

The Survey Area is located in an isolated undeveloped parcel directly west of American Fork Canyon. The Survey area is located almost entirely within the American Fork Creek floodplain and in an isolated area of upland sagebrush habitat at an elevation of approximately 4,950 feet above sea level. Soils within the Survey Area consist of upland cobble and gravel resulting from alluvial and colluvial fill associated with the American Fork Creek and Wasatch Mountains. Disturbance within the Survey Area includes residential development, irrigation ditches, public golf course, recreational land use, OHV use, and municipal and landscaping waste dumping. The Survey Area occurs directly within and immediately around American Fork Creek. During the time of the survey, no water was flowing within American Fork Creek. Given the present dry condition of American Fork Creek and review of aerial photography, it is expected that water is diverted upstream of the Survey Area. Evidence of water flows do occur within American Fork Creek low elevation floodplain and high-flow channels around the creek. Dominance of primarily upland vegetation and evidence of hydrology within American Fork Creek suggests that this section of American Fork Creek likely experiences ephemeral flows during peak run-off events in the spring when the impounded areas above the Survey Area are at capacity.

Land use directly adjacent to the Survey Area includes gravel mining, agricultural development and residential development to the north; recreational, residential, and American Fork Creek water control structures to the east, residential and recreational development to the south; and residential and recreational development to the west.

Results of the Southwest Regional Gap analysis vegetation layers identified the following communities as occurring within the Survey Area: Invasive and Perennial Grasslands, Inter-Mountain Basins Big Sagebrush Shrubland, Rocky Mountain Bigtooth Maple Ravine Woodland, and Rocky Mountain Lower Montane Riparian Woodland and Shrubland. Results of the field survey indicate the presence of the following vegetation communities: Inter-Mountain Basins Big Sagebrush Shrubland typified by the presence of sagebrush (*Artemesia tridentata*), broom snakeweed (*Gutierrezia sarothrae*), yellow rabbitbrush (*Chrysothamnus viscidiflorus),* rubber rabbitbrush (*Ericameria nauseosa*), Indian ricegrass (*Achnatherum hymenoides*), western wheat grass (*Pascopyrum smithii*), and Sandberg bluegrass (*Poa secunda*); Rocky Mountain Lower Montane Riparian Woodland and Shrubland typified by the presence of mahogany (*Cerocarpus montauns*), maple (*Acer* sp.), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), rubber rabbitbrush (*Ericameria nauseosa*); willow (*Salix* sp.), sunflower (*Helianthus annuus*), and cocklebur (*Xanthium* sp.); and Invasive and Perennial Grassland species occurring throughout the entire Survey Area including cheat grass (*Bromus tectorum*), dalmation toadflax (*Linaria dalmatica*), Russian thistle (*Salsola tragus*), and thistle species (*Cirsium* sp.). No wet meadows, springs, seeps, flowing water, or other areas capable of supporting permanent hydrophytic vegetation communities were identified within the Survey Area. A summary of common occurring plant species documented within the Survey Area is provided below.

Table 1. Common Plant Species Observed within the Survey Area

Species	Common Name		
Acer negundo	Box elder	*Helianthus spp.*	Sunflower
Acer sp.	Maple	*Hesperostipa comata*	Needle-and-thread
Achnatherum hymenoides	Indian Ricegrass	*Linaria dalmatica*	Dalmatian toadflax
Agropyron cristatum	Crested wheatgrass	*Pascopyrum smithii*	Western wheatgrass
Artemesia tridentata	Big sagebrush	*Poa secunda*	Sandberg bluegrass
Astragalus spp.	Astragalus	*Quercus gambelii*	Scrub oak
Bromus tectorum	Cheatgrass	*Rumex sp.*	Dock
Cerocarpus montanus	Mahogany	*Salix sp.*	Willow
Chrysothamnus viscidiflorus	Green rabbitbrush	*Salsola tragus*	Russian thistle
Cirsium vulgare	Bull thistle	*Sarcobatus vermiculatus*	Greasewood
Cleome serrulata	Rocky Mountain bee plant	*Sisymbrium altissimum*	Tumblemustard
Erigeronum spp.	Buckwheat	*Sporobolus airoides*	Alkali sacaton
Gutierrezia sarothrae	Broom snakeweed	*Verbascum thapsus*	Common mullien
Halogeton glomeratus	Halogeton	*Xanthium sp.*	Cocklebur

Wildlife habitat within the Survey Area includes small areas of open and disturbed shrubland, sparse trees within American Fork Creek floodplain, and ephemeral water associated with American Fork Creek. Although the Survey Area is surrounded by suburban development, it likely supports wildlife activities including breeding, nesting, foraging, and burrowing for small mammals and avian species. The following species, or evidence of their presence, was noted during the field survey: cottontail rabbit, mule deer, numerous avian species, and small burrowing mammals. Given the Survey Area's proximity to existing development, it is expected that wildlife occurring within the Survey Area would be acclimated to the presence of humans and noises associated with suburban development. No springs, seeps, or other permanent water sources capable of supporting fish or other aquatic species occurs within the Project. A summary of wildlife documented within the Survey Area are provided below in Table 2.

Table 2. Wildlife Species Observed within the Survey Area

Species	Common Name	Species	Common Name
Columba livia	Pigeon	*Carpodacus mexicanus*	House finch
Corvus corax	Common raven	*Poecile atricapillus*	Black-capped chickadee
Zenaida macroura	Mourning dove	*Sylvilagus sp.*	Cottontail rabbit
Turdus migratorius	American robin	*Odocoileus hemionus*	Mule deer (scat only)
Passer domesticus	House sparrow		

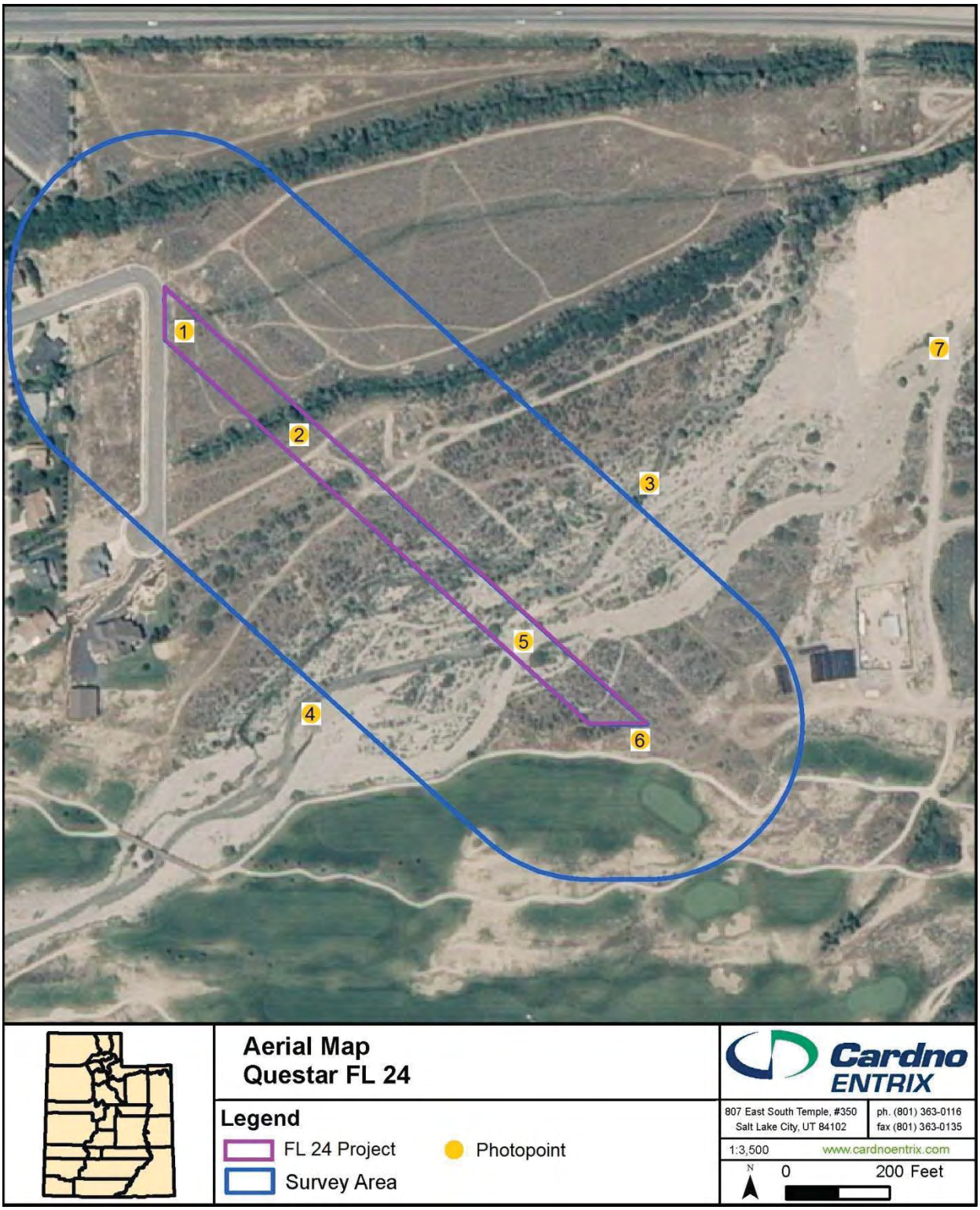

Figure 2 – Aerial Photo of Survey Area and Photo Points.

Photo 1 looking southeast at Project.

Photo 2 looking southeast at Project.

Photo 3 looking southwest within American Fork high flow channel and floodplain.

Photo 4 looking northeast within American Fork Creek main channel.

Photo 5 looking northeast within American Fork Creek main channel and at Project/American Fork Creek crossing.

Photo 6 looking northwest at Project.

Photo 7 looking at Project access crossing American Fork Creek.

3.2 SPECIAL STATUS SPECIES

Forty Special Status Species were evaluated for the potential to occur within or near the Survey Area based upon review of USFWS and USFS Special Status Species listings. Cardno ENTRIX has prepared Appendix A that includes the full list of Special Status Species identified as having the potential to occur within Utah County and has prepared species specific rationale used in the determination to identify the likelihood of occurrence of individual species within the Survey Area. Species specific determinations were based on individual species range and habitat preferences and compared to habitat identified as occurring within the Survey Area. Ten species Special Status Species identified as potentially occurring or present within the Survey Area are discussed in the sections below. Those species identified as having no potential to occur are excluded from further consideration or discussion in this report.

A UDWR Special Status Species data request was completed through the Utah Natural Heritage Program for the Survey Area. Results of the data request identified one USFWS species, a historic occurrence the yellow-billed cuckoo, as occurring within five miles of the Survey Area. No Special Status Species were identified within the Survey Area.

Thirteen USFWS TECP species were identified as potentially occurring in Utah County, Utah. Based upon the results of the data review, two species, the greater sage-grouse and Ute ladies'-tresses, were identified as potentially occurring based upon the presence of habitat capable of supporting these species. During the field survey habitat identified as potentially supporting these species was searched and evaluated. No USFWS TECP species, or habitat capable of supporting these species, were documented within the Survey Area.

Twenty-three USFS Sensitive species were identified as potentially occurring in the Region 4 Uinta Planning Area. Based upon the results of the data review, seven species, the bald eagle, peregrine falcon, boreal toad, Columbia spotted frog, spotted bat, Townsend's big-eared bat, and Wheeler's angelica, were identified as potentially occurring based upon the presence of habitat capable of supporting these species. During the field survey habitat identified as potentially supporting these species was searched and evaluated. No USFS Sensitive species, or habitat capable of supporting these species, were documented within the Survey Area.

Five USFS Management Indicator Species were identified as potentially occurring in the Region 4 Uinta Planning Area (Appendix A). Based upon the results of the data review, one species, the American beaver, was identified as potentially occurring based upon the presence of habitat capable of supporting this species. During the field survey habitat identified as potentially supporting this species was searched and evaluated. No USFS Management Indicator Species, or habitat capable of supporting these species, was documented within the Survey Area.

Table 3. Summary of Special Status Species Identified as Potentially Occurring within Survey Area

Species Name	Status	Likelihood of Occurrence
Bird		
Bald Eagle (*Haliaeetus leucocephalus*)	S	**Low**
Greater Sage-grouse (*Centrocercus urophasianus*)	C/S	**Low**
Peregrine Falcon (*Falco peregrinus*)	S	**Low**
Reptile and Amphibian		
Boreal Toad (*Bufo boreas*)	S	**Low**
Columbia Spotted Frog (*Rana luteiventris*)	S	**Low**
Mammal		
American Beaver (*Castor canadensis)*	MIS	**Low**
Spotted Bat (*Euderma maculatum*)	S	**Low**
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	S	**Low**
Plant		
Ute Ladies'-Tresses (*Spiranthes diluvialis*)	T	**Moderate**
Wheeler's Angelica (*Angelica wheeleri*)	S	**Low**

Status: E - USFWS Endangered; T - USFWS Threatened; C - USFWS Candidate Species; P – USFWS Petitioned; O - USFWS Delisted, S – USFS Sensitive, MIS – USFS Management Indicator Species for Uinta Planning Area.

United States Fish and Wildlife Service (USFWS) Utah Field Office Federally Listed and Proposed Endangered, Threatened and Candidate Species and Critical Habitat in Utah – Species List By County (accessed September 10, 2013) , United State Forest Service (USFS) Intermountain Region (R4) Threatened, Endangered, Proposed, and Sensitive Species List (Updated July 27, 2011); and State of the Forest Report for the Uinta National Forest, Uinta Planning Area, List of Management Indicator Species (September 2011).

Bald Eagle
The bald eagle, listed as a USFS Sensitive species, has been identified as having a low likelihood of occurring within the Survey Area and is protected under the MBTA and BGEPA. No habitat capable of supporting breeding or nesting for this species was identified, as no trees or suitable nesting substrate occur within the Survey Area. This species is not expected to use the Survey Area for breeding or nesting, but could occur as a rare visitor to the Survey Area in the winter. None of this species, or evidence of this species, was documented during the field survey.

Greater Sage-grouse
The greater sage-grouse, listed as a USFWS Candidate species, has been identified as having a low likelihood of occurring within the Survey Area. Results of the data review and USFS correspondence suggest that this species could occur within Survey Area. Results of the field survey documented the presence of disturbed sagebrush habitat supporting an understory of invasive annuals and grass species. Although this species has been identified as having a low likelihood of occurring within the Survey Area, the existing conditions of sagebrush habitat and surrounding land use would likely preclude this species from occurring within the Survey Area. This species is not expected to occur within the Survey Area as a resident during breeding or brood rearing or as a seasonal migrant. None of this species, or evidence of this species, was documented during the field survey.

Peregrine falcon
The peregrine falcon, listed as a USFS Sensitive species, has been identified as having a low likelihood of occurring within the Survey Area. Results of the data review and USFS correspondence suggest that this species could occur as a visitor to the Survey Area dispersing from adjacent nesting habitat along the Wasatch Mountains. Results of the field survey documented no suitable cliff nesting areas within the Survey Area or within 1.0 mile of the Survey Area. This species is not expected to use the Survey Area for breeding or nesting, but could occur as a rare visitor to the Survey Area for foraging or dispersing from adjacent nesting habitats. None of this species, or evidence of this species, was documented during the field survey.

Boreal Toad
The boreal toad, listed as a USFS Sensitive species, has been identified as having low likelihood of occurring within the Survey Area. Results of the data review suggest that this species could occur along portions of American Fork Creek within the Survey Area. Results of the field survey document that American Fork Creek is not a year round or perennial flowing water feature within the Survey Area. Given that this species is typically encountered in or near water, it is not expected that this species would occur as a resident to the Survey Area. This species could be encountered as a rare visitor to the Survey Area dispersing out of upstream portions of American Fork Creek from American Fork Canyon. None of this species, or evidence of this species, was documented during the field survey.

Columbia Spotted Frog
The Columbia spotted frog, listed as a USFS Sensitive species, has been identified as having low likelihood of occurring within the Survey Area. Results of the data review suggest that this species could occur along portions of American Fork Creek within the Survey Area. Results of

the field survey document that American Fork Creek is not a year round or perennial flowing water feature within the Survey Area. Given that this species is typically encountered in or near water, it is not expected that this species would occur as a resident to the Survey Area. This species could be encountered as a rare visitor to the Survey Area dispersing out of upstream portions of American Fork Creek from American Fork Canyon. None of this species, or evidence of this species, was documented during the field survey.

American Beaver

The American beaver, listed as a USFS Management Indicator Species, has been identified as having a low likelihood of occurring within the Survey Area. Results of the data review suggest that this species could occur along portions of American Fork Creek within the Survey Area. USFS presently manages populations of American Beaver within the Uinta Planning Area; however no management directives or future planning initiatives have been identified within or near the Project (USFS 2012). The closest beaver management areas occur over five miles east of the project (T4S, R2E, Sections 11, 24, and 36) within the Wasatch Mountains in areas which have been identified as "to be surveyed for beaver that contain no suitable beaver habitat" (USFS 201). American Fork Creek is not a year round or perennial flowing water feature within the Survey Area. Given that this species is typically encountered in or near water, it is not expected that this species would occur as a resident or rare visitor to the Survey Area. None of this species, or evidence of this species, was documented during the field survey.

Spotted Bat

The spotted bat, listed as a USFS Sensitive species, has been identified has having a low likelihood of occurring within the Survey Area. Results of the data review suggest that this species could occur within the Survey Area as during foraging activities or dispersing from adjacent habitats. Results of the field survey document that no suitable roosting habitat occurs within the Survey Area; however suitable roosting areas are adjacent to the Survey Area along the Wasatch Mountains. This species could occur as a rare visitor to the Survey area, but would be precluded from roosting or hibernating within the Survey Area due to the lack of suitable habitat. None of this species, or evidence of this species, was documented during the field survey.

Townsend's Big-eared Bat

Townsend's big-eared bat, listed as a USFS Sensitive species, has been identified has having a low likelihood of occurring within the Survey Area. Results of the data review suggest that this species could occur within the Survey Area as during foraging activities or dispersing from adjacent habitats. Results of the field survey document that no suitable roosting habitat occurs within the Survey Area; however suitable roosting areas are adjacent to the Survey Area along the Wasatch Mountains. This species could occur as a rare visitor to the Survey area, but would be precluded from roosting or hibernating within the Survey Area due to the lack of suitable habitat. None of this species, or evidence of this species, was documented during the field survey.

Ute Ladies'-tresses

The Ute ladies'-tresses, listed as a USFWS Threatened species, has been identified as having a moderate likelihood of occurring within the Survey Area. Results of the data review suggest that

this species could occur within the Survey Area along wet point bars and banks within American Fork Creek. Results of the field survey document that no suitable habitat occurs within the Survey Area. Evaluation of this species habitat was conducted within the Project and within 300 feet of the Project's proposed footprint. Field surveys completed in July 2013 documented flowing water (low flow) within American Fork Creek, however re-visits to the Survey Area during September 2013 documented that water was no longer present. Soils within this portion of American Fork Creek and associated floodplain are comprised primarily cobble, gravel, and sand supporting upland vegetation including sunflower, rabbitbrush, and cocklebur. Little to no vegetation occurs along the banks or point bars within this section of the creek. Hydrology to this section of American Fork Creek is regulated by water control structures upstream of the Survey Area and is not present for a duration to support the growth hydrophytic vegetation communities within the Survey Area. Furthermore, this section of American Fork Creek appears to be subject to high flows, which has created steep banks in areas and scouring and stripping of soils along the point bars and banks. Photos of the banks, bars, and general condition of American Fork Creek are provided below. Due to the lack of suitable habitat, lack of hydrology, and existing conditions of the banks and point bars this species is not expected to occur within the Survey Area. None of this species, or evidence of this species, was documented during the field survey.

Wheeler's Angelica

Wheeler's angelica, listed as a USFS Sensitive species, has been identified as having a low likelihood of occurring within the Survey Area. Results of the data review suggest that this species could occur within the Survey Area along boggy or wet areas associated with American Fork Creek. Results of the field survey documented that no suitable habitat occurs within the Survey Area. This section of American Fork Creek does not support wet areas, boggy areas, or permanent water capable of supporting hydrophytic vegetation. This species is not expected to occur within the Survey Area. None of this species, or evidence of this species, was documented during the field survey.

Photo of Project Location, evaluation for the presence of habitat capable of supporting Ute ladies'-tresses. American Fork Creek Photo July 2013 (left). Photo Sept 2013 (right)


Photo of American Fork Creek stream banks and areas of evaluation for the presence of Ute ladies'-tresses and associated habitat. American Fork Creek banks and bars upstream of Project.


Photo of American Fork Creek stream banks and areas of evaluation for the presence of Ute ladies'-tresses and associated habitat. American Fork Creek banks and bars downstream of Project.


Photo of American Fork Creek high flow (low terrace) channel and areas of evaluation for the presence of Ute ladies'-tresses and associated habitat.

4.0 DISCUSSION AND RECOMMENDATIONS

The Project is located in a disturbed and undeveloped parcel approximately 3.8 miles northeast of American Fork, Utah, directly west of American Fork Canyon. Construction activities associated with the Project include temporary disturbance to approximately 2.72 acres of existing vegetation and main channel of the American Fork Creek. Upon completion of Project construction, the disturbed areas will be re-contoured, reclaimed, and re-seeded. This Project is not expected to result in the permanent loss or destruction of sensitive or protected biological resources.

Wildlife habitat within the Survey Area includes small and isolated areas of sagebrush shrublands and sparsely vegetated riparian tree and shrub communities associated with American Fork Creek riparian areas and floodplain. No unique vegetation communities, riparian areas, or wetlands were identified within the Survey Area. Existing wildlife habitat within the Project would be temporarily disturbed, but would be reclaimed with an approved seed mix and return to existing conditions over time. Terrestrial wildlife occurring within or near the Project during construction would likely avoid the immediate areas during construction, but would return to the Project when construction is complete.

The Project crosses American Fork Creek, which contained no flowing water during the September 2013 survey. It is likely that water, which would otherwise be flowing in American Fork Creek, is diverted upstream of the Project, and occurs within the Project as ephemeral flow during peak spring run-off. In an effort to avoid any unforeseen impacts to aquatic wildlife within American Fork Creek, timing of Project construction could be timed at a period when water is no longer flowing.

4.1 SPECIAL STATUS SPECIES

Ten Special Status Species were identified as potentially occurring in the Project. No USFWS TECP species, USFS Sensitive species, or USFS Management Indicator species were documented to occur within the Survey Area. Based upon the results of the data review and field inventory, none of these species is expected to experience any short-term or long-term irreversible effects associated with the Project.

Bald Eagle
No habitat capable of supporting breeding or nesting for this species was identified, as no trees or suitable nesting substrate occur within the Survey Area. This species is not expected to use the Survey Area for breeding or nesting, but could occur as a rare visitor to the Survey Area in the winter. All potential negative impacts to this species could be avoided by timing construction of the Project outside the breeding and nesting season of this species (Jan 1 to Aug 31). If construction is timed to avoid this species' breeding and nesting period, **it is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Greater Sage-grouse
This species is not expected to occur within the Project due to existing conditions of sagebrush habitat within the Project and surrounding land use. This species is not expected to occur within the Survey Area as a resident during breeding or brood rearing or as a seasonal migrant. **It is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Peregrine falcon
This species is not expected to use the Survey Area for breeding or nesting, but could occur as a rare visitor to the Survey Area for foraging or dispersing from adjacent nesting habitats. All potential negative impacts to this species could be avoided by timing construction of the Project outside the breeding and nesting season of this species (Feb 1 to Aug 31). If construction is timed to avoid this species' breeding and nesting period, **it is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Boreal Toad
This species could be encountered as a rare visitor to the Survey Area dispersing out of upstream portions of American Fork Creek from American Fork Canyon. If construction is timed to avoid disturbance to American Fork Creek at a period when water is no longer flowing, **it is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Columbia Spotted Frog
This species could be encountered as a rare visitor to the Survey Area dispersing out of upstream portions of American Fork Creek from American Fork Canyon. If construction is timed to avoid disturbance to American Fork Creek at a period when water is no longer flowing, **it is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

American Beaver
This species is not expected to occur as a resident or visitor to the Survey Area. No known locations of existing or proposed USFS American beaver management areas occur within or near the Project (USFS 2012). **It is our conclusion that the Project would have no short-term or long-term irreversible effects to this species and that the Project would have no effect on continued USFS management of this species.**

Spotted Bat
This species could occur as a rare visitor to the Survey area during foraging activities, but would be precluded from roosting or hibernating within the Survey Area due to the lack of suitable habitat. Given that Project construction will be short term and all areas will be reclaimed, **it is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Townsend's Big-eared Bat
This species could occur as a rare visitor to the Survey area during foraging activities, but would be precluded from roosting or hibernating within the Survey Area due to the lack of suitable

habitat. Given that Project construction will be short term and all areas will be reclaimed, **it is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Ute Ladies'-tresses
This species is not expected to occur within the Survey Area due to the lack of suitable habitat. **It is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

Wheeler's Angelica
This species is not expected to occur within the Survey Area due to the lack of suitable habitat. **It is our conclusion that the Project would have no short-term or long-term irreversible effects to this species.**

5.0 REFERENCES

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APPENDIX A

SUMMARY TABLE OF UNITED STATES FISH AND WILDLIFE SERVICE FEDERALLY LISTED AND PROPOSED ENDANGERED, THREATENED AND CANDIDATE SPECIES AND UNITED STATES FOREST SERVICE SENSITIVE AND MANAGEMENT INDICATOR SPECIES WHICH MAY OCCUR WITHIN UTAH COUNTY, UTAH

Species Potentially Occurring in Utah County, Utah	Status	Habitat Description	Likelihood of Occurrence in Project
Bird			
Bald Eagle (*Haliaeetus leucocephalus*)	S	Occurs and nest near rivers and lakes.	**Low**: This species could occur along portions of American Fork Creek adjacent to the Project and occur at the Project as a visitor. This species would be precluded from nesting as no suitable nesting habitat occurs within the Project. USFS identified species as possibly present during the winter. (USFS, K. Hartman, 2013)
Flammulated Owl (O*tus flammeolus*)	S	Occur in montane pine forests and mountain ranges throughout Utah, and breeds primarily in southwestern and the north-central parts of the state.	None: Habitat capable of supporting this species is not present in the Project.
Greater Sage-Grouse (*Centrocercus urophasianus*)	C S	Occurs in sagebrush plains, foothills, and mountain valleys. Sage grouse breeding and nesting generally occurs from February to April in open canopy habitat including landing strips, old lakebeds or playas, low sagebrush flats, openings on ridges, roads, cropland, and burned areas.	**Low**: Marginal habitat is present within the Project. This species may occur as a rare visitor but is unlikely to occur as a resident as the Project is surrounded by urban and rural development. USFS identified species as having a low likelihood of occurring. Known sage grouse habitat is located ~40 miles west of the Project near Vernon, UT and ~30 east of the Project near Strawberry Reservoir (USFS, K. Hartman, 2013)
Northern Goshawk (*Accipiter gentilis*)	S MIS	Occurs in mature mountain coniferous forest and riparian zone habitats. Nesting occurs in trees in mature forests; often nests previously used by northern goshawks or other bird species are re-used.	None: Habitat capable of supporting this species is not present in the Project.
Peregrine Falcon (*Falco peregrinus*)	S	Occurs in a very wide variety of habitats on every continent except Antarctica. This species typically nests on cliffs and ledges throughout Utah.	**Low**: This species could occur within the Project as a visitor. This species preferred habitat does not exist within the Project. No cliffs or other suitable nesting habitat occur at the Project. USFS identified Slate Canyon, a known Peregrine nesting area,

Species Potentially Occurring in Utah County, Utah	Status	Habitat Description	Likelihood of Occurrence in Project
			occurs ~5 miles south of the Project (USFS, K. Hartman, 2013).
Three-Toed Woodpecker (*Picoides tridactylus*)	S MIS	Occur in spruce, fir, pine, tamarack, and aspen forests. In Utah, this woodpecker nests and winters in coniferous forests, generally above 8,000 ft elevation.	None: Suitable habitat does not exist within the Project. No forested areas occur within or near the Project.
Western Yellow-Billed Cuckoo (*Coccyzus americanus occidentalis*)	C	Occurs in large tracts of cottonwood and willow habitats with dense sub-canopies.	None: Suitable habitat does not exist within this Project. No large or dense tracts of cottonwoods occur at or near the Project.
Reptile and Amphibian			
Boreal Toad (*Bufo boreas*)	S	Occurs along low moving streams, wetlands, desert springs, ponds, lakes, meadows, and woodlands.	**Low**: American Fork Creek runs through the Project; however this area of American Fork Creek is modified and disturbed. This species could be encountered at the Project dispersing out of American Fork Canyon.
Columbia Spotted Frog (*Rana luteiventris*)	S	Occurs in isolated springs and seeps that have a permanent water source, and move overland in spring and summer after breeding. During cold winter months, spotted frogs burrow in the mud and become inactive.	**Low**: American Fork Creek runs through the Project; however this area of American Fork Creek is modified and disturbed. This species could be encountered at the Project dispersing out of American Fork Canyon.
Fish			
Bonneville Cutthroat Trout (*Oncorhynchus clarki utah*)	S MIS	Occur in the Bonneville Basin drainages of Utah and are rare throughout their historic range. Known populations occur in Bear Lake and Strawberry Reservoir.	None: American Fork Creek runs through the Project; however this area of American Fork Creek is impounded, modified, and disturbed. The present condition of American Fork Creek would preclude this species from occurring within the Project.
Bonytail (*Gila elegans*)	E	Occurs in eddies, pools, and backwaters near swift current in the Colorado River and tributaries..	None: Suitable habitat does not exist within this Project. American Fork Creek is not a tributary of the Colorado River.

Species Potentially Occurring in Utah County, Utah	Status	Habitat Description	Likelihood of Occurrence in Project
Colorado Pikeminnow (*Ptychocheilus lucius*)	E	Occur in the Colorado River in habitats ranging from deep turbid rapids, flooded lowlands, and slow-moving backwaters.	None: Suitable habitat does not exist within this Project. American Fork Creek is not a tributary of the Colorado River.
Colorado River Cutthroat Trout (*Oncorhynchus clarki pleuriticus*)	S MIS	Occur in the upper Colorado River drainage of Utah in isolated high-elevation headwater streams.	None: Suitable habitat does not exist within this Project. American Fork Creek is not a tributary of the Colorado River.
Humpback Chub (*Gila cypha*)	E	Inhabit areas of the upper Colorado River and tributary streams with a fast paced stream with an abundance of shade.	None: Suitable habitat does not exist within this Project. American Fork Creek is not a tributary of the Colorado River.
June Sucker (*Chasmistes liorus*)	E	Occurs naturally in Utah Lake and the Provo River.	None: American Fork Creek runs through the Project; however this area of American Fork Creek is impounded, modified, and disturbed. The present condition of American Fork Creek would preclude this species from occurring within the Project.
Least Chub (*Iotichthys phlegethontis*)	C	Formerly occurred in many areas of the Bonneville Basin, including ponds and streams near Salt Lake City and the Great Salt Lake, it now occurs only in scattered springs and streams in western Utah.	None: Suitable habitat does not exist within this Project. The Project is outside the known range of this species.
Razorback sucker (*Xyrauchen texanus*)	E	Occurs in the Colorado and tributaries in slow backwater habitats and man-made impoundments.	None: Suitable habitat does not exist within this Project. American Fork Creek is not a tributary of the Colorado River.
Southern Leatherside Chub (*Lepidomeda aliciae*)	S	Occur in the Utah Lake and Sevier River drainages.	None: American Fork Creek runs through the Project; however this area of American Fork Creek is impounded, modified, and disturbed. The present condition of American Fork Creek would preclude this species from occurring within the Project.
Mammal			
American Beaver (*Castor canadensis)*	MIS	Occurs in streams and rivers of Utah.	**Low**: American Fork Creek runs through the Project; however this area of American Fork Creek is impounded, modified, and disturbed. This species could occur within the Project dispersing from areas adjacent to the Project.

Species Potentially Occurring in Utah County, Utah	Status	Habitat Description	Likelihood of Occurrence in Project
Bighorn Sheep (*Ovis canadensis*)	S	Occur in steep rocky slopes, and may migrate from higher elevations to lower valleys in the winter.	None: Suitable habitat does not exist within this Project. No steep rocky slopes occur within or near the Project.
Canada Lynx (*Lynx canadensis*)	T	Occurs in montane coniferous forest of the northern United States and Canada. Documented in Manti-La Sal National Forest.	None: Suitable habitat does not exist within this Project. No coniferous forests occur at this Project.
Fisher (*Martes pennant*)	S	Inhabit riparian, coniferous, deciduous and mixed upland and lowland forests of northwestern and eastern United States and Canada.	None: Habitat capable of supporting this species is not present within the Project.
Spotted Bat (*Euderma maculatum*)	S	Occur in a variety of habitats, ranging from deserts to forested mountains; and roost and hibernate in caves and rock crevices across Utah below 9,000 ft.	**Low:** Suitable roosting habitat does not occur within this Project, however this species could occur as a visitor to the site flying through or foraging.
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	S	Occur in a rage of habitat but often found near forested areas. Caves, mines, and buildings are used for day roosting and winter hibernation.	**Low:** Suitable roosting habitat does not occur within this Project, however this species could occur as a visitor to the site flying through or foraging.
Plant			
Barneby Woody Aster (*Aster kingii var. barnebyana*)	S	Found in hardwood forests on steep outcrops, in an elevation range between 6,000 to 10,00 ft.	None: Suitable habitat does not exist within the Project. The Project is below elevations where this species is known to occur. No steep outcrops or forest occurs within the Project.
Clay Phacelia (*Phacelia argillacea*)	E	Occurs in Spanish Fork Canyon, Utah County on fine textured soils and fragmented soils of the Green River Formation. Grows on barren hillsides in sparse pinyon-juniper mountain brush communities at 5,800 to 6,000 ft.	None: Suitable habitat does not exist within the Project. No Green River formation soils occur at the Project. The Project is outside this species known range.
Dainty Moonwort (*Botrychium crenulatum*)	S	Found around creeks, spring, and spring brook banks. In riparian, herbaceous, and forested wetlands. Must have an abundance of shade with a high moisture content along the banks.	None: Suitable habitat does not exist within the Project. No forested habitat occurs within the Project.
Deseret Milkvetch (*Astragalus desereticus*)	T	Occurs exclusively on steep sandy-gravelly soils on south and west facing slopes. This species grows in an open pinyon-juniper-sagebrush community, at elevations ranging from 5,200 to 5,500 feet.	None: Suitable habitat does not exist within the Project. No loose sandy soils on steep slopes occur within the Project. The Project is outside the known range of this

Species Potentially Occurring in Utah County, Utah	Status	Habitat Description	Likelihood of Occurrence in Project
			species.
Garrett Bladderpod (*Lesquerella garretti*)	S	Occurs in the crevices in limestone cliffs and talus along the Bear River Range in Cache County.	None: Suitable habitat does not exist within this Project. No limestone cliffs are present. The Project is outside the known range of this species.
Garrett's Fleabane (*Erigeron garrettii*)	S	Occurs in moist cliff faces and crevices, mainly in limestone in Salt Lake and Wasatch Counties. Moist cliff faces and crevices at 8,700 to 12,000 ft.	None: Suitable habitat does not exist within this Project. No limestone cliffs are present and the Project is located below the elevation where this species is known to occur. The Project is outside the known range of this species.
Rockcress Draba (*Draba globosa*)	S	Alpine tundra and meadows 11,000-12,500 ft. mainly in Uinta Mountain Range and in Cottonwood Canyons in Salt Lake County.	None: Suitable habitat does not exist within this Project. No alpine tundra-meadow habitat occurs at the Project. The Project is below the elevation where this species is known to occur. The Project is outside the known range of this species.
Santaquin Draba (*Draba santaquinensis*)	S	Occur in limestone outcrops in coniferous forest and only known to occur in American Fork, Provo, and Santaquin Canyons.	None: Suitable habitat does not exist within the Project. No limestone ledges or edges occur within the Project.
Slender Moonwort (*Botrychium lineare*)	S	Occur in grass, shrub, and habitat across the entire forest in riparian areas above 9,000 ft. in shaded woods and woodlands, grassy horizontal ledges along north-facing limestone cliff.	None: Suitable habitat does not exist within this Project. No riparian habitat or limestone cliffs occur at the Project. The Project is below the elevation where this species is known to occur.
Utah Ivesia (*Ivesia utahensis*)	S	Occur within alpine tundra along arid, steep, highly eroded and eroding slopes Summit, Utah, Wasatch, Weber Counties above 10,000 ft.	None: Suitable habitat does not exist within this Project. No steep eroding slopes occur within the Project. The Project is below the elevation where this species is known to occur.
Ute Ladies'-Tresses (*Spiranthes diluvialis*)	T	Occurs along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams.	**Moderate:** Suitable riparian, gravel bars, oxbows, and high flow channel habitats around American Fork Creek are present

Species Potentially Occurring in Utah County, Utah	Status	Habitat Description	Likelihood of Occurrence in Project
			within the Project.
Wasatch Draba (*Draba brachystylis*)	S	Occurs in moist to damp soils with rocks, in rock pockets, or along bank in in moderate to high elevation coniferous and aspen forest communities between 5,500 – 9,800 ft.	None: Suitable habitat does not exist within this Project. No coniferous or aspen forests are present at the Project.
Wasatch Fitweed (*Corydalis caseana brachycarpa*)	S	Occur in mid mountain coniferous forests along streams in moist soils from 6,200-10,000 ft.	None: Suitable habitat does not exist within this Project. No coniferous forest streams occur in the Project.
Wasatch Jamesia (*Jamesia americana macrocalyx*)	S	Occur in mountain brush and spruce fir, mostly on cliffs and rocky places on granite or limestone cliffs to 5,700 to 12,000f t.	None: Suitable habitat does not exist within this Project. No limestone or granite cliffs, or rocky areas occur at the Project.
Wasatch Pepperwort (*Lepidium montanum alpinum*)	S	Occur in damp rocky crevices at high elevations in sagebrush and spruce-fir communities, Salt Lake County approximately 6,000 to 9,000 ft.	None: Suitable habitat does not exist within this Project. No damp rocky crevices occur within the Project. The Project is below the elevation where this species is known to occur.
Wheeler's Angelica (*Angelica wheeleri*)	S	Occur in boggy or very wet areas, often in riparian communities or near seeps and springs at 4,800 to 9,700 ft..	**Low**: Suitable habitat may be present within the riparian areas associated with American Fork Creek.

Key: **Status**: E - USFWS Endangered; T - USFWS Threatened; C - USFWS Candidate Species; P – USFWS Petitioned; O - USFWS Delisted, S –USFS Sensitive, MIS – USFS Management Indicator Species for Uinta Planning Area.

United States Fish and Wildlife Service (USFWS) Utah Field Office Federally Listed and Proposed Endangered, Threatened and Candidate Species and Critical Habitat in Utah – Species List By County (accessed September 10, 2013) , United State Forest Service (USFS) Intermountain Region (R4) Threatened, Endangered, Proposed, and Sensitive Species List (Updated July 27, 2011); and State of the Forest Report for the Uinta National Forest, Uinta Planning Area, List of Management Indicator Species (September 2011).

APPENDIX B

UDWR DATA REQUEST RESULTS

GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

GREGORY SHEEHAN
Division Director

October 15, 2013

Aaron James
Cardno Entrix
807 East South Temple, Suite 350
Salt Lake City, Utah

Subject: Species of Concern Near Section 31 of Township 4 South, Range 2 East, SLB&M, Utah County, Utah

Dear Aaron James:

I am writing in response to your email dated October 8, 2013 regarding information on species of special concern proximal to Section 31 of Township 4 South, Range 2 East, SLB&M, Utah County, Utah.

The Utah Division of Wildlife Resources (UDWR) does not have records of occurrence for any threatened, endangered, or sensitive species within the project area noted above. However, within a one-mile radius there historical records of occurrence for yellow-billed cuckoo. All of the aforementioned species are included on the *Utah Sensitive Species List*.

The information provided in this letter is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the central region, Mark Farmer, at (801) 491-5653 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

Sarah Lindsey

Sarah Lindsey
Information Manager
Utah Natural Heritage Program

cc: Mark Farmer

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